DEPARTMENT OF TECHNOLOGY
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Telephony

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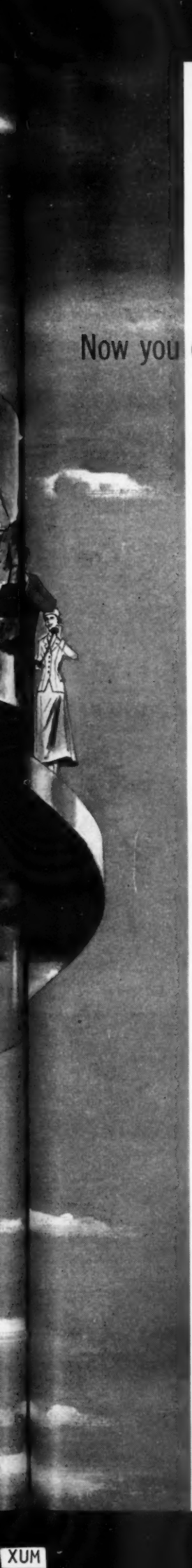
Guaranteed Circulation This Issue
12,181 of Which 11,613 is Paid

COUNTY FAIR ADVERTISING

Well-planned merchandising program drew nearly 8,000 people to display booth of Chenango & Unadilla Telephone Corp. at the Chenango (N. Y.) County Fair. Good results followed in terms of public relations and new service orders. See story on page 35.

MANAGEMENT • PLANT • TRAFFIC • COMMERCIAL • LEGAL • ACCOUNTING

XUM



Now you can serve up to 50 more subscribers per conductor pair with

New, Transistorized STROMBERG-CARLSON "561" Subscriber Carrier

Increased operating profits, through expanded service at lowest possible cost, is the ideal of your business. We believe this new carrier provides exactly this, more efficiently than any comparable equipment.

With Stromberg-Carlson's "561" you can serve *up to 50 additional subscribers* on an existing pair of conductors, on a fully selective ringing basis—or over 100 with code ringing. And installation of subscriber carrier costs as little as 10% to 15% of the investment in the terminals.

Compare these other advantages with other carriers:

- The Stromberg-Carlson "561" requires only 3½ inches of vertical space per central office terminal.
- Being transistorized, the carrier is completely free of the problems inherent in tubes.
- Power requirement of central office channel is only 3 watts (idle) and 3.5 watts (operating).
- No AC power required on central office terminals since equipment operates on 48 volts.
- Plug-in construction means compactness and easier access for maintenance.
- The oscillator is *crystal*-controlled.
- Printed-wiring assures permanent trouble-free operation.
- Carrier line impedance balanced for BOTH open wire (600 ohms) and cable (150 ohms).
- Compandors are *optional.* If you don't need them, you don't pay for them—if you do, they're available and perfectly matched.

Complete descriptive literature is available from your nearest Stromberg-Carlson sales office.

STROMBERG-CARLSON

A DIVISION OF GENERAL DYNAMICS CORPORATION

Sales Offices: Atlanta 6, Chicago 6, Kansas City 8, Rochester 3, San Francisco

XUM

New, exclusive cab-forward design

One of 9 reasons why you'll find International Trucks cost least to own!

Compact, new cab-forward INTERNATIONAL Trucks feature *low*, full-size cabs for convenient access to save drivers time and effort . . . short turning radius with bumper clearance for easier maneuvering even in tightest quarters.

These new INTERNATIONALS have more powerful engines in every model—more *usable* power at low rpm to keep operation and maintenance costs low. They haul bigger legal loads with improved weight distribution, with less over-all length.

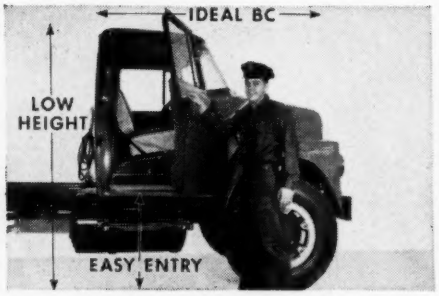
As you would expect, new cab-forward INTERNATIONALS are quality-built from the rugged bumpers to the end of the sturdy frames . . . built to do a truck job better, longer, for less.

And INTERNATIONAL Trucks cost *least* to own—cost records prove* this. Let your INTERNATIONAL Dealer show you today.

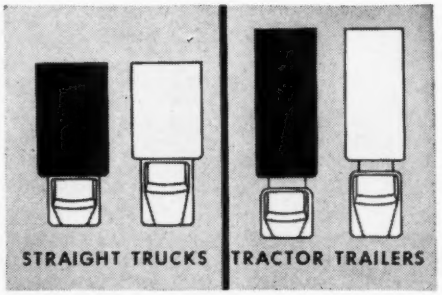
**Signed statements in our files, from fleet operators throughout the U.S., back up this statement.*

INTERNATIONAL HARVESTER COMPANY, CHICAGO

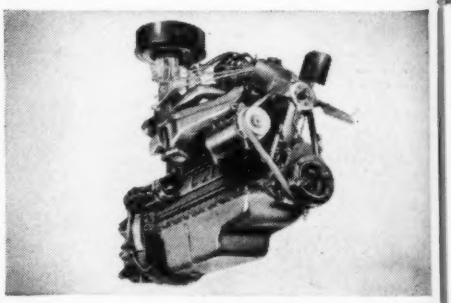
Motor Trucks • Crawler Tractors
Construction Equipment • McCormick® Farm Equipment and Farmall® Tractors



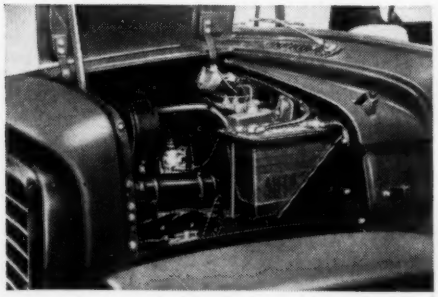
1 Longer legal payloads with ideal 89-inch bumper-to-back-of-cab dimension. Full size, unobstructed cab has 61-inch full-width seats, no wheelhousings. Only 3¼ inches higher than conventional models. Easier, more convenient entry and exit.



2 Bigger payloads with better weight distribution. More load space than conventional trucks with same over-all length—or the same load space with shorter over-all length. Easier to drive and maneuver. Safer, too, with better all-around vision.

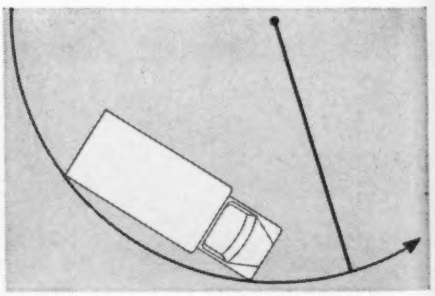


3 Lively, low cost performance with INTERNATIONAL-built engines that produce more *usable* horsepower at low rpm. Higher compression ratios for greater efficiency and economy. 12-volt ignition with "hot spark" circuit. Engines for every job.



4 Superior engine accessibility saves time and money. Large side opening hood permits complete freedom to all engine compartment components. Master cylinder, battery and most frequently serviced units are conveniently located.

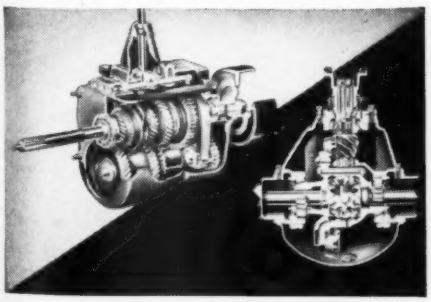
5 Low first cost. New INTERNATIONAL cab-forward models are priced right down with the lowest. They are quality-built throughout to keep operating and upkeep expense at rock bottom. Result: they are built to cost *least* to own over the years.



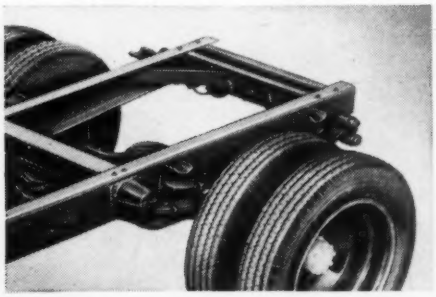
6 Minimum front overhang and true geometric steering for short turning radius with bumper clearance. Cam and roller-mounted twin lever gears are mounted ahead of the front axle. Comfortably positioned four-spoke, safety steering wheel.

This is the new INTERNATIONAL cab-forward design . . . Golden Anniversary models with short 89-inch bumper-to-back-of-cab dimension . . . trucks that are low in height, low in price. All have more powerful six-cylinder engines.

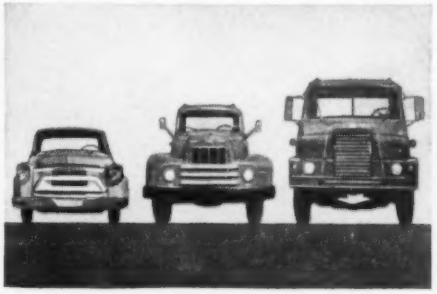
Four-and six-wheel models from 9,000 to 33,000 lbs. GVW are available with the widest selection of components and equipment to match every hauling job requirement exactly . . . built to cost *least* to own over the years.



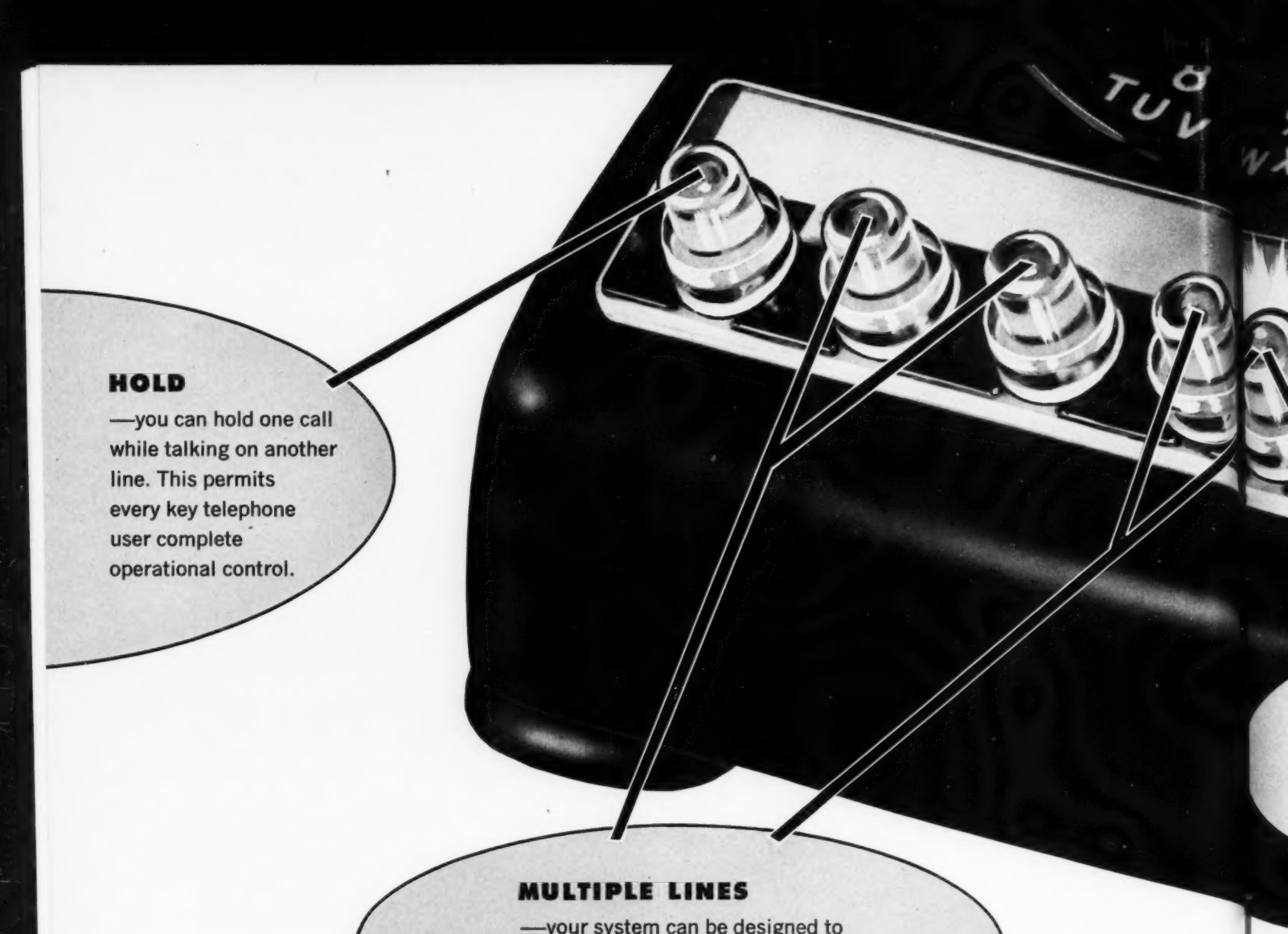
7 Choice of transmissions and rear axles assures you the proper capacity and final drive ratios to match the engine power, your load and road conditions *exactly*. You save on fuel. You get superior on-the-job performance and extended truck life.



8 Steel-Flex frames combine great strength without excess weight. Non-crystallizing cold squeezed rivets are used throughout for extra rigidity and proper flexibility. Factory-built drop-frame models are available to reduce loading time and effort.



9 World's most complete line. There is an INTERNATIONAL "tailor-made" for every job, half-tonners to 96,000 pounders. Choice of 4-wheel, 6-wheel and all-wheel-drive models, conventional and COE design. Every one built to cost *least* to own.



HOLD
—you can hold one call while talking on another line. This permits every key telephone user complete operational control.

MULTIPLE LINES
—your system can be designed to select as many as four central office or PBX lines, thus affording maximum use at all times.

IT'S THE BIG

It's BIG saleswise. *1A1 Type key systems are selling faster than any other type in the nation. Subscribers in independent areas want the best, too, and they get it with the K1A1.*

It's BIG featurewise. *Kellogg's K1A1 has all the important features which have made 1A1 systems so popular, including dial intercommunication, and illuminated buttons.*

But it's SMALL in size and cost. *The K1A1 key systems is engineered to be easy to install. It occupies a minimum of wall space. And it's rugged equipment . . . maintenance calls are reduced to a minimum.*

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DIAL INTERCOMMUNICATION
—permits you to select any one of eight other key telephones in the system by simply dialing one digit.

ILLUMINATED BUTTONS
—flash on incoming calls and burn steady when handset is lifted—prevents accidental interference by other users.

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Export Distributor:
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On its way to you . . . the story flashes first to this busy newsroom . . . by telephone. Minutes later, on-the-scene pictures speed along the same wires. Throughout *two-thirds of the entire nation*, news that makes headlines . . . and news that makes neighbors . . . travel the telephone lines of Independent companies. Their service brings all of us closer together.

60 Years of Growing Service 1897-1957

INDEPENDENT TELEPHONE COMPANIES

helping you reach all America

U.S. Independent Telephone Association
Pennsylvania Building, Washington, D.C.

This 40th USITA national ad appeared in October 7 *Time* and October 18 *U. S. News and World Report*

NEW, SHORT *Koiled Kords**

CUT HANDSET LOSSES . . . on Coin Collector Telephones

These new short KOILED KORDS retractile cords allow sufficient length for use in telephone booths but are short enough to prevent the handset from hitting the floor if dropped.

Figure your past losses from broken handsets and you'll see how much these new short KOILED KORDS can save you.

These new short KOILED KORDS are available for Automatic Electric, Stromberg-Carlson and Western Electric handsets. Order direct from your telephone supply distributor.

KOILED KORDS, the original retractile cords, are the result of 17 years of research, development and use.

*KOILED KORDS is a trade mark of KOILED KORDS, INC.

Koiled Kords INCORPORATED, BOX K, NEW HAVEN 14, CONN.

FLASHES AND PLUGS

SCIENCE FICTION, PRE-SPUTNIK. A Washington sign painter whose lightly vaulting fancy anticipated the sputnik by too wide a margin, on Oct. 3 plead guilty to fraud by wire and false pretenses for claiming that he visited Venus on a space ship. He faced a maximum of eight years in prison and a $1,000 fine. U. S. District Judge James Morris deferred sentence pending a probation report, reports the *Associated Press.*

The sign painter with the high-powered imagination and poor sense of timing, was accused of claiming that while on Venus he had learned how to produce a "magnetic flux modulator" having an energy potential far greater than that of atomic energy.

He was indicted on charges of obtaining $12,000 under false pretenses from a Washington secretary, who said she had turned over about $40,000 to the intra-stellar adventurer, supposing he was investing the money in his project.

The painter, 59, was quoted as saying he had inspected a space ship which had landed in Texas and had flown in the ship with Prince Ucellus of Venus to Venus, with a stopover on the moon.

While on Venus, he reportedly said he had learned how to make the power plant.

After giving her money to him, the secretary said she received a telephone call from a person representing himself as having come from Venus who told her the intrepid explorer had died on that planet.

By strange coincidence, the painter went to Prichard, Ala., about that time. FBI agents arrested him there on Mar. 25.

•

DOGGONE IF IT WASN'T! A Port Huron (Mich.) telephone operator, says the *United Press,* was handling a collect call to a Cloey Muser. She was unable to find a Cloey listed but tried a Muser residence.

She was told: "Yes, I'm Mr. Muser, but not Cloey Muser. I did have a dog named Cloey, but he's gone."

Then he hesitated and said: "Oh, well, I'll accept the charges and see what it's about."

A voice at the other end said: "It's Cloey Muser who's calling you. This is the Detroit dog pound and he's here."

•

WHEN A FELLER NEEDS A FRIEND. Police in Duluth received an emergency call recently and hurried to a residence where they found a housewife wedged between refrigerator and the kitchen counter.

She said she was cleaning between them and got stuck. The only thing she could reach was the telephone.

CHANGE OF ADDRESS

Please notify your local postmaster and the Circulation Dept. of TELEPHONY of change of address. Change cannot be made without the old as well as the new address. Allow three weeks for change of address to become effective.

Telephony

THE JOURNAL OF THE TELEPHONE INDUSTRY
Since 1901

October 19, 1957

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versatile

[fast and economical, too]

Noted for its speed, accuracy and resulting cost savings, the Burroughs Sensimatic can take on any assignment in your accounting system and whip through it on the double.

Secret of this proved mastery is the exclusive sensing panel that makes the Sensimatic the most versatile accounting machine you can buy. Just a flick of the knob gives you a choice of four jobs. And your Sensimatic automatically zips through the chosen procedure, makes decisions and complicated motions *for* the operator, sharply reduces any chance of mistake. To handle more jobs, you just insert another of the interchangeable sensing panels.

Because the Sensimatic is so fast, so error-free, it quickly pays for itself in time and effort saved. And there's no obsolescence. To change your accounting system, you merely change sensing panels. That's all.

For a complete—a *convincing*—demonstration, see the Sensimatic in action at our nearby branch office. Six series, 2 to 19 totals, to choose from. Burroughs Corporation, Detroit 32, Michigan.

Burroughs

"Burroughs" and "Sensimatic"—Reg. TM's.

BURROUGHS SENSIMATIC ACCOUNTING MACHINES

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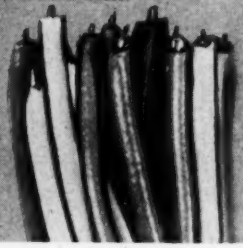
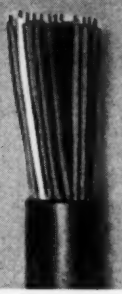
THE MESSAGE IS: MONSANTO

Sturdy OPALON 72285 over primary insulation for color-coded, weather-resistant jacketing. Polyethylene 14202 and 11302 for primary insulation of conductors and insulation for steel support wire in Multi-Pair Distribution Cable.



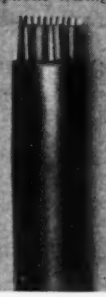
Polyethylene 12203 and 12253 for primary insulation, Polyethylene 14202 for jacketing in jacketed Thermoplastic-insulated, Thermoplastic-sheathed Telephone Cables.

OPALON 1706 for semi-rigid primary insulation in various types of communication cable.



Rugged weather-resistant color-coded OPALON 72285, available in eight standard colors, for primary insulation, and Polyethylene insulation for steel support wire on Urban Distribution Cable.

OPALON 1006 for primary insulation. OPALON 72217 for jacketing in Inside Telephone Wiring Cable.



your finest single-source for **polyethylene and vinyl** *telephone insulating compounds*

Wire and cable producers like the multiple choice that Monsanto supply offers—9 formulations, polyethylene or Opalon vinyl, all specially developed for critical communications applications.

Here, from one great single-source, are the insulating compounds combining the many different mechanical and electrical properties you need . . . insulating efficiency, extrusion characteristics, surface finish, weatherability, colorability.

Call in your local Monsanto representative for the full communications story, or write for technical data and other information to Monsanto Chemical Company, Plastics Division, Room 3081, Springfield 2, Massachusetts. OPALON: REG. U. S. PAT. OFF.

MONSANTO

TS-472
A good one-man runabout for initial inspection, minor repair.

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One-man unit for construction and cable splicing.

HOLAN BODIES FOR CABLE SPLICING

CS-490
Two-man unit for maintenance.

...ALL MADE OF HIGH-TENSILE STEEL

CS-102S
Two-man maintenance buoy and ladder for aerial cable work, patrolling, inspection, emergency.

CS-102
One-man material delivery truck.

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THE NAME THAT MEANS WORK SIMPLIFICATION

Everything
LEICH
A MEMBER OF THE GENERAL TELEPHONE SYSTEM
GENERAL SYSTEM
ONE OF AMERICA'S GREAT COMMUNICATIONS SYSTEMS

Needs Maintenance...but—

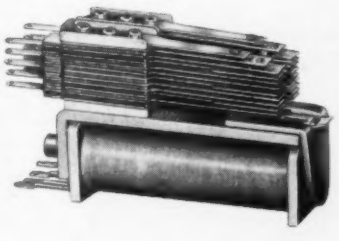
LEICH DIAL SYSTEM users tell us that it is easier to understand and maintain than any other dial switching system.

It's true that the Leich Dial System requires maintenance. Just about everything does. It's also true that the Leich Dial System requires less upkeep than any other dial system.

Telephone men with no dial experience operate and maintain the Leich Dial System easily. Many of them have learned the few fundamentals they need to know by attending Leich's training school. We hold classes several times a year at the Leich Electric plant in Genoa, Illinois.

We're happy to report that there are now over 800 Leich Dial Systems giving their owners easy-to-understand, dependable switching. This kind of service can be yours, too. Write today for more information.

Here's Why—

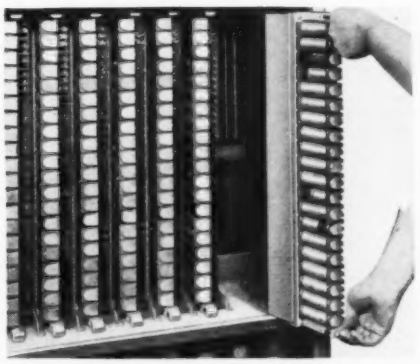


1. All-Relay Dependability

The Leich Dial System is an all-relay dial switchboard. Leich relays are well known for their reliability of operation and long life. They eliminate mechanical switching mechanisms which are apt to wear and require maintenance or adjustment.

Leich relays have been tested for many million operations with no failures. Leich relay-switches have withstood millions of operations without readjustment, replacement, or signs of wear.

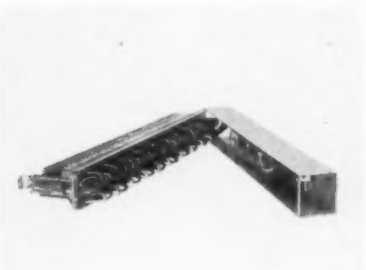
Your switchboard man can learn the basic maintenance more quickly because he is more familiar with relays than with mechanical parts.



2. Jack-In Flexibility

You can jack-in lines, links, and selectors with the flexible Leich Dial System. This eliminates the need for factory installers, soldering, and wiring.

If trouble should develop in a relay-switch or a relay bar, it's no great worry. A spare part can be jacked-in and the part in trouble returned to the shop for expert servicing.



3. Everything Is Accessible

The Leich Dial System has no back-to-back arrangements. You don't have to spend hours removing one part to get at another.

All the parts are arranged so that each is visible and accessible. For example, note the relay bar above. It can be slid out from its jack and in a minute or two the cover opened up to expose the relays and the wiring.

LEICH SALES CORPORATION, 427 WEST RANDOLPH STREET, CHICAGO 6, ILLINOIS

PACIFIC COAST: 11401 WEST PICO BLVD., LOS ANGELES 64, CALIFORNIA SOUTHWEST: 1227 SLOCUM STREET, DALLAS 7, TEXAS

manufacturers of telephones, switchboards and related apparatus since 1907

up a tree?

Increased costs edging you out on a limb? Maybe we can help. Records show that our Complete Directory Service Plan is operating successfully for independent telephone companies in 4400 communities. We handle everything. Turn out good looking directories . . . with fewer headaches, more income.

Like to know how? We'll be happy to show you. Just call or write our nearest office.

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Freedom of Speech For Public Utilities?

By Francis X. Welch
***Telephony's* Washington Editor**

SELF-PRESERVATION, the sages assure us, is the first law of nature. In the human race as well as in the animal kingdom, there is an instinctive reaction to strike out or strike back whenever life or security appears to be imperiled. And so whether it is a mother robin defending her nest, or students rioting in Poland or Hungary, we all realize that these actions spring from inner compulsions which should command our respect. Such actions may be futile or even ill-advised, but we can understand why they are undertaken.

Under our American democracy, the federal Constitution has surrounded this natural impulse with certain safeguards which we call civil rights. These include the various freedoms of speech, of press, of assembly, of religious worship, of trial by jury, and the right to vote. Then, too, there are the various *protective* rights, such as protection against being enslaved, or protections against unlawful search and seizure, against confiscation or against cruel or torturous punishment, double jeopardy, and so forth.

We do not always think of these various civil rights as being safeguards abetting our instinct of self-preservation. But they are, every one of them, if we want to think them through. The freedom of speech, or of press, for example, was not intended merely to assure some exhibitionists in the community of opportunities to make indecent exposures of their own ignorance by writing silly letters-to-the-editor of the daily newspaper.

True, that is the way some use this privilege. But, essentially, freedom of speech is to help us as an individual to *live* in a broader sense.

And the broader sense means our way of life. A Democrat or Republican wants to go on being a Democrat or Republican, respectively. He wants to influence others to obtain a majority, if he can do so. He cannot do so if he is to be gagged or prevented from meeting with others, or from voting freely, or doing other things which the Bill of Rights protects. The same way with a vegetarian who wants to go on being a vegetarian, or a Mohammedan who wants to go on being a Mohammedan.

Rights of trial by jury and protection against self-incrimination or cruel punishment are, of course, more obviously related to the individual's right of personal self-preservation. But all of these rights and freedoms, such as speech, press, worship, and so forth, are part of a protection which the founding fathers sought to create for the individual citizen.

Our country was still young when an important question arose as to whether a corporation was entitled to these constitutional guaranties. A corporation is an artificial entity created by law for purposes of commerce and other forms of organized enterprise. Obviously a corporation has no need for some of the constitutional guaranties (such as protections against cruel and unusual punishment) because a corporation cannot be put into jail, anyhow. A corporation does not go to church, so it has no need for religious protection. It cannot vote and it cannot be enslaved.

But there are some things which a corporation does require for its own preservation even though it is only an artificial personality. A corporation has property, or is responsible for the property of others; namely, the shareholders. So, therefore, it is entitled to protection from confiscation. A corporation also has citizenship, of a sort, because it is "domiciled" in one state rather than another.

And so it was that the U. S. Supreme Court in a number of decisions during the nineteenth century recognized the applicability of the Bill of Rights to business corporations, for purposes of protecting the property of those who had invested in such corporations.

All this is by way of prelude to a question which is becoming more and more important during this period of controversy over rate cases; that is: whether a business corporation (specifically a public utility corporation) has a right to speak up in its own behalf.

When we stop to think that a public utility corporation is simply an artificial form for protecting the property interest of its investors, it might be said that the management of such company should have not only the right, but also the *duty* to speak up in its defense. This is particularly true in situations where the financial integrity or security of the corporation is threatened by adverse developments.

Public Utility Advertisement

But there are some people who take the narrow view that everything a public utility company does results in an expense either to the ratepayers or the company's owners. Therefore, they believe that management should not

do anything at all, except whatever is absolutely necessary in the operation of the company. Such a narrow-minded view is occasionally taken by those who say that a public utility company should not advertise.

Every experienced public utility executive has run across this persistent fallacy on the part of the uninformed or the biased persons, whose real objective may be to injure the company, if not destroy it. A Socialist, for example, who honestly does not believe that public utilities should be operated by any body except the government, could take no better course of action than to forbid a public utility to advertise or speak up in its own defense.

But the motive behind such criticism is not always so frank. We can understand what the honest Socialist wants. He wants to destroy the public utility corporation and the American enterprise system because he thinks he has a better substitute—public ownership.

The reason some other critics of public utility advertising give are somewhat more subtle, and can easily ensnare the unthinking element which might already be prone to believe the worst about "business interests."

A recent letter-to-the-editor published in one of the Southern daily newspapers, is fairly typical of this sort of fuzzy thinking. Here is a condensed text of that letter:

"Why should the _____ company be permitted to spend thousands of dollars taking up time and space in newspaper advertising, over radio and television in order to justify their position in a rate case?

"The only purpose of that rate case was to raise the rates which the public has to pay; and on top of that the public will have to pay for all this fancy publicity!

"What does a public utility company have to advertise for anyhow? It is a monopoly with a captive patronage. The public has no choice except to go on taking the service, no matter how high the rates are.

"Something ought to be done about this extra gouge whereby the citizens of this community are being asked to pay the bill for their own brainwashing."

The foregoing is just chock-full of errors of facts and judgment. Let us take it apart and spot some of the flaws. First of all, does a public utility have to advertise? Of course it does. There are various forms of advertising. The most necessary form is that designed to give the customer information about the service.

Take the case of a telephone company converting from manual to automatic operation; or a gas company converting from artificial to mixed or natural gas; or an electric company changing the location of its downtown office headquarters or opening up a neighborhood branch; or a transit company changing the routes or time schedules of its buses or streetcars. Clearly, advertising designed to acquaint the public with such service information is not only permissible, but necessary. Public utility companies would be downright delinquent in their service obligation if they did not do everything possible to tell the public what the public needed to know about these things.

The expense, of course, would be an operation expense and chargeable as such. Even the irritable letter-writer quoted above would probably break down and admit that such a type of advertising or other publicity sponsored by a public utility is allowable and desirable.

Let us take another form of publicity *not* chargeable against the utility ratepayers. Suppose a public utility company wants to announce the offering of a new security issue, or suppose it wants to "call" some outstanding bonds for redemption. The only way it can do this under the law (in fact it is required under the law) is to advertise such information in the newspaper, or in other ways in which it will do the most good.

This form of advertising and publicity is strictly for the benefit of the company owners. As such, its cost is never assessed against the ratepayers as an operating expense. It is nearly always charged to the company's capital, as an expense to be borne by the owners of the company *after* the return allowance from rate revenues.

So, that leads us to a distinction

REA Telephone Loans Total $1,474,000

The Rural Electrification Administration approved three telephone loans to new borrowers in Iowa, Michigan and Wisconsin the week of Sept. 30. With these funds, totaling $1,474,000, the borrowers will furnish new and improved service to 3,548 rural subscribers.

Badger State Telephone & Telegraph Co., Neillsville, Wis.; $774,000, first loan (Sept. 30).

This borrower provides common battery and magneto service to 1,696 subscribers and 242 switchers. Central offices are at Granton and Neillsville.

With these funds, the company proposes to improve service for its existing subscribers and to add facilities to serve 279 families now without telephones.

A new automatic central office is scheduled for Granton, a combination headquarters-automatic office building at Neillsville.

In addition to its regular subscribers, the borrower proposes to furnish switching service to 373 families.

William L. Smith is president and Herbert M. Smith is manager of the Badger State Telephone & Telegraph Co.

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Bloomingdale (Mich.) Telephone Co., $350,000, first loan (Oct. 3).

The borrower now provides magneto service to 524 rural subscribers. With the REA loan, it plans to convert its system to automatic operation, and add facilities to provide initial service for 201 families and other rural organizations. A new automatic central office is scheduled at Bloomingdale.

Ralph Remington is president and Lovell L. Cook is manager of the Bloomingdale Telephone Co.

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Farmers & Business Men's Mutual Telephone Co., Wheatland, Iowa; $350,000, first loan (Oct. 4).

The new borrower, a commercial corporation, plans to use this loan to improve service for 680 existing subscribers and to serve 168 rural families without telephones. The company now furnishes magneto service through the Calamus and the Wheatland exchanges. It proposes to replace the present exchanges with new automatic central offices.

Lester Christensen is president of the Farmers & Business Men's Mutual Telephone Co.

which the courts and commissions have made in determining who pays the expense of public utility advertising and publicity. Where the purpose of the expenditure is to improve, maintain, or protect the usefulness and security of the *service* to the public, it is a proper operating expense.

Where, on the other hand, the purpose of the expenditure is to improve, maintain, and protect the integrity of the *investment* of the public utility business, it is for the benefit of investors, and properly charged to capital accounts.

Who Pays For Advertising?

In between these two clear-cut examples we have types of public utility advertising which are not so clearly defined. In the electric utility business, for example, there has been a steady invasion, over the past twenty-odd years, of government ownership. Today one-fifth of that industry is engulfed.

The management of electric utilities considers this concerted drive for Socialism harmful to both the investment and the utility customer. In the end both will suffer, in the management's view, if the American way of life—free private enterprise—is destroyed and Socialism substituted. And so, the electric companies have gotten together on a program for advertising benefits of private ownership in various ways—newspapers, magazines, radio, and television. Most electric utility company managements feel that such protective steps are legitimate operating expenses—just the same as hiring a night watchman to look out for the company's property, or hiring a lawyer to defend the company in court against damage suits or other claims.

A recent opinion of the Federal Power Commission took a somewhat different view as to how such expenses should be charged. But it did not challenge the utility company's right to make the expenditure.

The case in point involved a Virginia electric company, which had spent several thousands of dollars for reprints of an article against Socialism. Copies of these reprints were sent to various people in the company's service area, which comprises the entire state of Virginia.

The FPC was asked by a Congressional committee to decide if this was a proper operating expense. The commission decided that the company should have charged it against capital accounts rather than operating expense.

But it reached the interesting conclusions that it did not *really make any difference!* The total amount—which would not have purchased a single fully equipped service truck—was relatively inconsequential. The commission found that if it had been spread over the bills of the company's hundreds of thousands of customers, the difference could hardly have amounted to more than a penny or two for the entire year. The expense of tracing and allocating the amount would have been greater than the actual differences whether it was charged to the ratepayers or to the capital account.

That brings up another important point overlooked by our irritable letter writer—the relative amount of a disputed expense. When the entire budget of these challenged items is spread over a year's operation of a large utility company, very often it is difficult to see, as in the FPC case, what difference it would make which method were followed.

Very often, in the same spirit, uninformed critics of public utility companies sound off about "high salaries" paid to company officials. Early in the New Deal the late President Roosevelt once seriously commented on the question whether anyone ought to be earning more than $25,000 a year. Of course the dollar went a lot further in those days. But the real test of whether a man is worth what he is paid is the result he achieves.

Suppose the payment to a baseball player, of the caliber of Joe DiMaggio, of $150,000 a year (for six months work at short hours) means the difference between a successful pennant contender club bringing in millions in the box office, and a second division club hardly able to pay its bills. Even the barflies at the corner tavern would admit that such a ball player is worthy of his hire at six figures!

Why is not the same principle applicable to business corporations? The plain answer is that it *is* applicable. Common sense demands that a company pay for comparative results.

The "Monopoly" Argument

The idea that a public utility company does not have to advertise because it is a monopoly, and because customers have no place else to go, is another old fallacy that is hard to kill. The irritable letter writer does not understand, of course, that promoting new business through advertising can actually mean *lower* rates and *better* service to those who are already customers. The monopoly factor is an illusion.

First of all, public utility companies of all kinds are in competition with all other lines of business and with each other for the customers' dollars. The customer has only so many dollars. And whether they are spent for television, or an automobile, or a washing machine, or for better telephone service, depends on appealing to the customer's own desires. The accepted form of making an appeal to his desires is through advertising and other forms of publicity and promotional activity. It is the good old American system of competition and there is nothing monopolistic about it.

More than that, if a public utility company can, through advertising or otherwise, promote "off-peak" or new forms of business in addition to its existing business, it means better use of plant. It means more revenues from the same plant investment. That in turn can mean better service at lower rates to *all* customers, than would otherwise be possible if such additional business were not developed. Surely such advertising and promotion is for the benefit of the customer himself and a proper operating expense.

The Real Motives of Critics

Now we come to the real reason behind some of the criticism of public utility advertising and publicity. This has reference to the charge that telephone companies and other public utility companies should not defend their position in rate cases by publicity.

We have seen instances of this in two states, where there have been controversial telephone rate cases.

In Louisiana the state commission itself has directed the Southern Bell telephone company to keep separate accounts of expenditures made for advertising in daily newspapers and other publicity justifying the company's rate case position.

In California a similar course has been urged on the California commission, although no action has yet been taken.

The real concern of such critics, of course, is not so much who pays the bill as what is being said in these advertisements. These critics do not like what is being said. It hurts. They want to use a gag and stop the company from talking.

They would like to take away from the telephone company its right of freedom of speech. That is because what the company is saying makes the position of these critics increasingly uncomfortable and untenable. They don't like it.

And yet when we consider the balance of equities on both sides of these controversies, paid advertisement is about the only weapon the telephone company could use. In the case of Louisiana, at least, it has tried its case

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Leads constructed beyond the highway right of way lines will reduce future costs without disturbing the existing investment.

Design and Operation of Small Companies

By R. J. POLLOCK

Part 2

Planning Location of Facilities

IN SELECTING locations of the outside plant facilities for rural and urban sections consideration should be given to some very basic conditions which have a definite bearing on the final cost picture. In many instances, smaller companies think that a rebuilding job means that the entire present plant should be displaced. This can only result in removing units of plant, such as poles, anchors, crossarms, cable and wire, which have not been fully depreciated.

The cost of proceeding in this manner can be very great, but is not usually figured in dollars and cents so that it is not given too much consideration. The reasons why it is done are many, the main one being that a fully rebuilt plant will require little or no maintenance for a period of years after the work has been completed.

Here, again, the cost of this reduced maintenance is not usually set forth in dollars and cents so that a direct comparison can be made. If, however, a spot check is made on a number of plant units which can be left in place, it will tend to show that the maintenance saving is in reality a large expense.

The replacement of the units left in plant during the rehabilitation can be made over a period of years after the rebuilding job has been completed in connection with a planned maintenance program. The cost of it will not require new money if an adequate depreciation reserve is maintained, and will reduce the amount of new money needed for the original rebuilding program.

It is difficult to determine where the idea that the entire plant has to be replaced in a rebuilding job originated but it would appear that it has about as much basis in fact as the "One Hoss Shay," by Oliver Wendell Holmes.

Many conditions, such as a road-widening program, will not permit the use of some existing plant, but, generally, some units can be reused in the new design without expending labor to accomplish the resultant saving. This is especially true in the case of bracket leads on town roads where additional right-of-way is not being purchased by the highway people. When we consider the miles of bracket lead on town roads, compared with heavier leads on state and county highways, it is evident that the saving could result in a considerable amount of money and would not have any material effect on the grade of telephone service being supplied.

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In the heavier populated townships, the town roads are continually being improved, with small portions of the work being done on an annual basis, so that pole leads in those locations are subject to moves in accordance with the township schedules. If all leads are rebuilt at the time the exchange is rehabilitated, it is very likely that some of them will have to be moved within a few years. If, then, those leads which have five or more years of remaining life are left in place and given only such maintenance that will assure their being capable of giving good service, a definite saving can be realized. This is especially true on those roads which have not been subjected to widening and improvement work in recent years.

Telephone pole leads which have been constructed in the past were usually placed in or near the fence line on town roads, while those on the main highways were placed not more than 5 feet from the right-of-way line of the highway. Those leads which are located so that a crossarm projects over and onto private property could result in a problem if the property owner objects to the overhang.

Fortunately, objections of this kind are very limited, although some railroad companies and a few land-owners will not permit the practice unless they receive an annual fee for the privilege.

In the case of private land-owners, it is possible to make a small, one payment fee to secure an easement on private property just beyond the highway right-of-way line which can be recorded with the register of deeds. A procedure of this kind constitutes a form of ownership of the land and, being owned by a public utility, it cannot be condemned for highway purposes without considerable legal action.

If, then, the new lead is constructed 1 foot outside of the highway right-of-way line, a future road widening program would necessitate the highway department's purchase of the easement rights at a price equivalent to the plant loss on the telephone facilities involved.

Depending on the number of easements secured, the original cost of them would be high, but compared to the plant loss experienced in connection with a few road moves, it would appear that the plan should be given consideration.

There appear to be overwhelming objections on the part of highway people and others to the proposed legislation aimed at reimbursing utilities for moving facilities along federal highway projects. The securing of easements in those states which have statutes prohibiting condemnation proceedings on public utility property might well be the entering wedge to change the general thinking in favor of this legislation.

Incidentally, the easement can be made to permit tree trimming and spraying on rural leads, thereby eliminating many of the present conditions imposed on the utility by the highway departments. However, wanton use of the privilege would certainly result in corrective legislation, along with adverse public opinion.

The location of urban aerial leads, both cable and open wire, should, as far as possible, be built along alleys or along lot lines on private property. Easements in those cases are difficult to secure and generally are not necessary since the owner is well aware of the improved appearance of his property when the lead is in the rear of it instead of in front of it.

In general, a lead constructed on private property is not subjected to the hazards normally encountered on roads, streets or alleys. The possibility of damage from vehicles is eliminated except at street crossings and usually the fire hazard caused by burning buildings is small since most out-buildings, such as garages, are not usually built on the rear lot line if there is a street entrance. This is not the case of a lead built in an alley. Here the fire hazard is increased considerably since the majority of the garages are built on the rear of the lot to facilitate easy entrance from the alley.

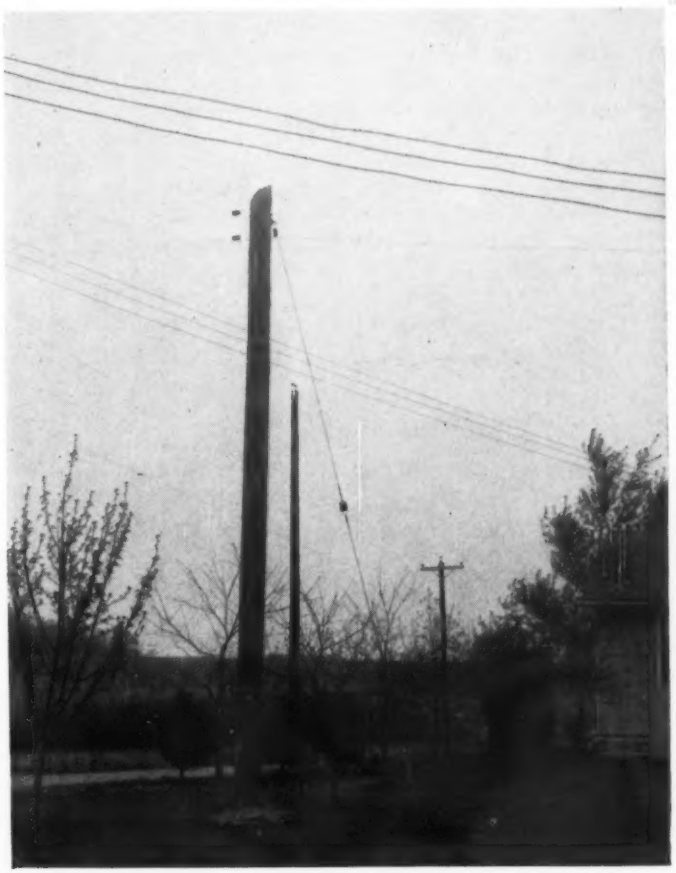
While the maintenance costs, especially in connection with cable plant, due to fire might be increased, a better job can be done from that location as far as serving the customer. Drop wires can be placed across lots from the same terminal, thereby resulting in a saving of material and labor. In those cases where customer objection is encountered, a span clamp can be installed.

Where an outdoor protector is used, it is not as conspicuous in the rear as it is when placed on the front of the house. It is also easier in the majority of cases to make the wire entrance into the house.

The problem of tree clearance from alleys and lot lines is also greatly reduced compared to leads on streets.

In general, leads built in alleys, and especially on private right-of-way, have a very good chance of being in place throughout their estimated life with the exception of those that have been under-engineered.

The present thinking on the part of the public does not favor utility pole leads on streets; and in those cases where objections are not evident at



Poor engineering judgment can only resul: in unnecessary increased costs.

this time, they will, no doubt, come up in the future. This will result in additional costs covering the retirement of useful plant.

This problem can be solved by joint occupancy of poles with the power company in alleys and on lot lines to the fullest extent. Big advantage to the telephone company is that service wire clearances are more easily maintained, compared with individually owned leads. The tree problem is also not as objectionable compared to that which would be encountered on the ornamental trees on the street.

There are a number of objections to joint-use contracts with power companies which tend to put undue burdens on the telephone company, especially in the case of tree trimming in rural and urban areas. In urban areas, the trees are rounded off for appearance and, since the telephone company occupies the lower portion of the pole, all new growth will grow into its facilities long before it reaches the power wires.

In rural areas, the trees and brush do the same thing, but here the problem is solved by removing or topping them so that wire clearance is maintained. If, then, the joint-use contract is not specific on how those costs are divided, the telephone company could be carrying the larger portion.

Surprising as it may seem, some REA electric cooperatives are now requesting that the telephone company clear the brush from below the lead after which the cooperative will carry the spraying cost to control tree growth during the life of the lead. This is being done where the telephone company requests contact privileges some years after the line has been built. This seems to imply that tree and brush control was not given serious consideration when the REA electric line was built, but its true worth is now being recognized. This is largely not the case with privately-owned power companies. With present-day high costs of tree and brush clearance, it would be a decided advantage to the power company to have the telephone company occupy the same poles if only for trimming purposes.

Another objection to joint-use with privately-owned power companies is the indiscriminate use of 35-foot poles as standard units, which results in a larger expenditure for the telephone companies when a smaller pole would meet their clearance requirements. Here again the REA has recognized this point and are using poles of the size actually needed.

The increase in inductive interference, and also increased electrical hazards, on jointly occupied poles, will not be discussed here, but their effect on communication facilities should be considered in planning the location of a proposed lead, both in urban and rural construction.

Efforts should be made to have existing contracts revised if they do not have a clause which specifically states how the trimming and spraying costs will be divided during the period of joint occupancy. In heavily wooded areas, these costs represent a considerable annual maintenance charge which is carried as an operating expense. However, in many exchange locations, the tree problem has very little significance, but the additional cost to the telephone company, resulting from occupying a lead of greater size and strength, is common to all locations.

The revised thinking originated by the communications people suggests that a differential rate be set up on a one-third, two-thirds basis. Here the power company would pay the latter rate on all poles set by the telephone company and the one-third rate would apply to telephone contacts on power poles.

Incidentally, the rate should be set as a representative figure which reflects the actual annual carrying charges on a standard jointly occupied pole. In a number of cases in the past, it was set very high without any apparent reason.

A number of power companies, including some REA cooperatives, have entered into agreements of the differential type. Unfortunately, a large number of them do not recognize the necessity for such an agreement for reasons of their own and, since joint-use is advisable in many locations, the telephone company has no other choice than to continue, for the time being, with the present contracts.

Joint-use of poles with other telephone companies, such as Bell companies, either on the contact or on an owned interest basis, is very desirable since both occupants are familiar with the operating problems which are encountered from a communications standpoint. The annual rental costs chargeable to the licensee are also in line with the space actually used.

In general, it is more advisable to occupy the poles on a contact rental basis where a small cable is used, or where the open wire circuits do not require a crossarm.

In the event that joint-use of poles is being contemplated, consideration should be given to future maintenance costs especially if that work, such as pole replacement, is to be done by the other company since their costs may be considerably greater than those of the smaller company.

However, great benefit of joint-use can be realized if the work is done jointly in accordance with the percentage of ownership in the lead, and maximum savings to each company can be more readily realized if each owner handles the complete work on individual poles in accordance with their interests in the total lead.

A cable or wire plant to be constructed on a street, unless the boulevard is without trees, signs, and other obstructions, will necessitate a higher labor cost. Here, the additional labor required to place the facilities through trees and other obstructions will be high, compared to normal construction, and additional material will have to be used, such as guard and side-arm material, in order to reduce future damage and the resultant increased maintenance costs.

Automobile damage is also more prevalent, not only from street traffic but from the fact that most traffic to and from private garages necessitates either backing the car out of or into the garage. Also, a paved driveway entrance could increase pole replacement charges to a point where either the insurance company or the city street department could bring pressure to have the facilities moved to a less hazardous location.

Underground facilities could be placed to eliminate these conditions but the additional cost would, in most cases, eliminate this consideration, especially on the smaller distribution cables, and would not eliminate the problem of cable riser poles. However, this type of construction should be studied carefully before main feeder leads are constructed.

Present-day conditions may point strongly to constructing these leads with aerial cable as they could remain in place for many years, eliminating the possibility of public objection or pressure for removal of them shortly after the construction is completed. A change from aerial construction might also be advisable for reasons which were not evident at the time of construction.

If any underground conduit is placed, it is absolutely necessary that detailed records covering the construction be set up by the company. The exact location of the conduit should be recorded with respect to some permanent mark along with the grade depth between manholes. This information requires little effort to secure at the time of construction and will be invaluable in connection with future street improve-

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TELEPHONY'S Traffic Engineering Handbook

By Gilbert R. Brackett

Section 2 (Continued)
What Is Traffic Engineering

In automatic central offices, the number of talking paths to which a call has access varies with the type of equipment:

(1) In step-by-step equipment the maximum access to trunk paths for any one call is mostly limited to 10.

(2) At switchboards, the number of operators who can team together in answering calls varies up to the number which may be the total positions in the line of switchboard.

(3) The service objective controls the efficiency of a group of channels, auxiliary features or operators.

The efficiency of a group of trunks is the percentage of the time during an hour that all trunks of a group are in use, on the average, in carrying calls. It is arrived at by dividing the Hundred-Call Seconds (CCS) capacity of the group by the product of the number of trunks in the group and 36.

The capacity of a trunk group is the amount of traffic offered to the group expressed in terms of the number of 100 call-seconds of the load which will receive a specified grade of service.

The maximum CCS load that one trunk can handle in an hour is 36, since there are 3,600 seconds in an hour.

Section 3
The Traffic Engineer's Job

Traffic engineering judgment is vital to good service and equipment costs. The traffic engineer looks into the mind of the user to find the things most important to him, service-wise. That is why he must appraise the service potential of the equipment he proposes—to see that he satisfies the subscriber's interest in: *First*, the frequency with which he can, on the first attempt, make connection to the telephone he wishes to reach; *second*, the length of time it takes to reach it.

The subscriber cannot predict one hour in advance the use he will make of his telephone. But the traffic engineer must do this very thing for a group of users, if he is to perform well as an engineer. In doing so he makes use of the laws of probability. He finds it necessary to carefully analyze the component parts of the commodity with which he is working and combine them with judgment and such mathematical laws as he can adopt to his use.

Traffic engineers are responsible for initiating a major portion of the telephone equipment involved each year. They answer for the spending of a few thousand dollars in small exchanges to millions in the multi-office cities.

The amount of facilities provided is governed by the volume of traffic that is offered during the hour of the day when the volume of traffic is at its peak—that is the busy hour.

If facilities were provided in such numbers that they would be busy for the entire 3,600 seconds of the busy hour, the investment in telephone equipment would be much less than is now the case. The reasons why such a situation cannot be arrived at is:

(1) The grade of service received under such a condition would not be acceptable to the subscriber as calls would have to be backed up so there would always be at least one call waiting when the equipment or operator became available.

(2) It would be impossible to so design a telephone system so that all its channels would be wholly in use for every second of every day.

In addition to the quantity of traffic, the grade of service to be given also influences the provision of facilities.

The service potential for a given traffic load and equipment situation is measured in terms of the grade of service that is to be furnished.

When the service objective is such that only a small number of calls cannot be advanced on the first attempt because all paths are busy, the grade of service is the percentage of calls which finds all trunks busy.

Judgment is the constant companion of the traffic engineer, as he develops statistics and data for an automatic or manual central office. The dial engineer must decide on the future calling rates and holding times from past records and make decisions on whether to use the lesser or higher number of trunks shown on capacity tables. The manual engineer must depict the number of future calls or messages of various types from the records at hand.

The traffic engineer must be familiar with his company's day-to-day policy—is it a period of expansion, building up plant for future economies, or a time for watchful waiting?

When service data is not available he must know of the service situation in the exchange under study and the service objective to aim for. He decides if the offered facts have been rightly evaluated and if they meet with the operating people's approval and he must decide whether the information received is hearsay, unsupported opinions, or usable data.

When a manual office is up for conversion to automatic, should inefficient equipment be continued for the time being, even though additional operating labor may be necessary to maintain the service objective? The traffic engineer must consider the length of time a poor service condition may be continued and weigh service against cost. Unfavorable conditions are usually tolerated for short periods but bring about severe chain reactions if continued too long.

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The traffic engineer should know if the data he uses is recent enough to be representative of present needs, and whether the sample is so small it is doubtful if deviations from average have been eliminated. He must decide whether the life of the facilities is short enough so that he may use non-standard equipment to save costs for the time being. But he should understand that any savings could be quickly wiped out if future additions are based on standard arrangements.

The traffic engineer should be aware of the nature, scope, history and policy of his company, what it produces, the area it serves, the size of the exchanges as to facilities and employes.

He must be familiar with operating practices, their purpose and arrangement, and know how to use them. He should also have a knowledge of central office management, peg counts, the use of coefficients and the application of force adjustment.

The traffic engineer is, in a sense, a public relations man because he must understand the importance of public approval. As such he selects the equipment that will give the appropriate grade of service, the speed of dial tone, or operator answer, and the percentage of calls encountering busies on local and switching facilities. Simply, he must have a knowledge of community telephone needs, the relative costs of different service levels and a complete understanding of the relationship between loads and service and costs and public acceptance.

Careless engineering administration is wasteful of equipment and results in high costs and an unnecessarily poor grade of service. Public criticism follows and this affects the community standing of the telephone company.

The traffic engineer must keep apace with new developments and facilities in order that he may be in position to specify them when they will promote better service at less cost. To do so, he must work closely with other departments so that he may anticipate proposed changes in equipment designs and associate them with office requirements and company needs.

The interconnection of stations in a telephone system is a major problem that becomes more complex as the number of stations increases. It is the aim of all traffic engineers to provide facilities in such quantities and types at the time needed to insure a fair balance between the quality of service rendered and the cost of providing the communications.

The traffic engineering job is a highly specialized combination of know-how and judgment. Before putting his approval on any job, the traffic engineer should ask himself: "Why do it this way? Why do it now? Why do it at all?"

The over-all job of traffic engineering may be defined as the process of determining and the provision at the proper time of adequate quantities of the correct types of equipment and trunks so located and arranged that, when used as dictated by accepted operating and force adjustment practices, the desired balance between quality and cost of service will result.

To do this, the traffic engineer should obtain basic data, such as line and switch estimates, calling rates, holding times, operating characteristics, operating loads and miscellaneous features required at installations.

He will necessarily keep a running record of the number of stations, trunks and monthly messages for the larger and active systems, as an important source of information from which quick estimates may be made of equipment quantities under different plans and arrangements.

The application of distribution percentages to the call carrying capacity of existing trunks and, in some cases, to monthly messages reduced to busy hour calls usually will result in accurate enough data for preliminary estimates.

Section 4
Step-By-Step System

The step-by-step automatic equipment was originally designed primarily to take care of communities or small towns, but it has been expanded in scope to where it now serves many multi-office cities.

The step-by step system may be considered to consist of three major parts—line equipment, switch train and connectors. Line equipments serve to connect a calling party to the switch train. The switch train is made up basically of step-by-step selector switches which operate in the correct sequence to extend the calling party's connection to the connector group which serves the called party. Connectors continue the connection to the called party's line.

Step-by-step selectors respond directly to dial pulses and this means that the dial numbering plan and step-by-step trunking are inseparable. Because of this relationship a simplification of design and a saving in equipment often results from a careful selection of automatic central office codes as well as the selection of the type of step-by-step equipment needed to fill the requirements for a numbering plan that is proposed.

A step-by-step system can be used in two, three, four, five and six and seven-digit numbering plans. Six digit numbering plans usually consist of a two-digit prefix (office name) followed by four numerical digits. The trend now is toward a two-five arrangement, that is, a two-digit letter prefix, an office numeral, followed by four numerical digits. Existing plans which do not conform to the 2-5 arrangement must eventually change to the 2-5 plan in order to take part in the Direct Distance Dialing (DDD) system that is rapidly covering the nation.

The name step-by step is descriptive of the manner in which dialed calls progress, each digit dialed by the subscriber causing a separate mechanism to function to advance the call through various steps necessary for completion.

Trunking

The word "trunk" implies a common use by a number of people while the words "customer's line" suggests a line for the individual use of the customer. This adds up to the certainty that enough trunks must be supplied between two switching points such as First Selectors to Second Selectors, to meet the maximum number of simultaneous calls that will originate in that trunk group.

If enough trunks are not supplied, too many delays in the form of "busies" would result and our customers would receive poor service. It is, therefore, essential in the interest of good service and public esteem that the customer be provided with a trunking system that is at all times adequate to his needs.

(Section 4 will be continued in the Nov. 2 issue)

XUM

Consumer Study Reveals Low Expenditure for Communication

Nationwide survey of home operation and improvement expenditures patterns shows average American family spent only $39 on communications last year.

A STUDY of the consumer spending patterns of American households —conducted by *Life Magazine* to provide data that will aid business in market analysis and development—has shown that the average family surveyed spent only $39 for communications (chiefly telephone) in 1956.

We are presenting this summary of the buying habits of the average family because we believe it will be of value to telephone companies—particularly to commercial people—in planning merchandising and sales campaigns.

The study revealed that the best customers for products required for home operation and improvement are households headed by a professional or semi-professional worker who lives in a big-city suburb, who is in his 30's and whose children are under 10 years old.

In the *Life* study, interviews were completed with a nationwide sample of 24,112 individuals in 10,243 homes. Each household was interviewed an average of eight hours. As regards both depth and scope, it was stated the only comparable survey is that undertaken in 1950 by the Bureau of Labor Statistics.

Practically all categories of consumer spending for goods and services during 1956 were included in the *Life* study, except those for contributions, vacations and travel, and education. The total accounts for 200 billion dollars, or approximately four-fifths of total dollars spent by U. S. households for all purposes during that year.

The data of the first report of the *Life* study, released on Sept. 23, provides estimates of total exependitures in eight major consumer product classifications in 1956, and reveals who spent how much in some 57 specific categories within those classifications. Later reports from the study will add "when" and "where" to the expenditure information.

Expenditure Rankings

"Home operation and improvement" is included in the current *Life* study as one of the eight major product classifications. The study reveals that the average U. S. family, which spent a total of $4,110 in 1956 on all consumer goods and services, spent $763 on this classification, ranking it second among the eight. Nineteen per cent of the total spending for goods and services by the average household went for home operation and improvement.

This compares with 29 per cent of total spending allotted to food, beverages and tobacco, 14 per cent for the purchase, operation and maintenance of the family car, 12 per cent for clothing and accessories, 9 per cent for home furnishings, equipment and appliances, 5 per cent for medical and personal care, 5 per cent for recreation, and 7 per cent for miscellaneous.

Seven products or classes of products or services are included in the study's home operation and improvement classification. Housing (rented or owned, but excluding down payment on owned) accounts for the largest share of spending. The average family spent $442 in this category in 1956.

For home heating fuels and plant, the average family spends $153, *for communications (chiefly telephone) $39*, for materials (insulation, wall board, roofing, etc.) $18, for home decoration materials (paints and varnishes, wallpaper, etc.) $18, for miscellaneous $52.

The *Life* study shows that income remains important as to both the amount and direction of spending. Almost half of all consumer spending is accounted for by the third of the nation's households with income of $5,000 and over. The third of the households with income under $3,000 accounts for less than a fifth of consumer spending.

But the study also highlights the fact that both amount and direction of spending are influenced by other major factors as well. These include geographic and market location, occupation and education of household head, age of household head, position in life cycle (age of children in household; no children). All of these factors are analyzed in detail in the study.

Responsive to Income

Expenditures for home operation and improvement are responsive to increase in income, but the portion of total expenditures allotted to home operation and improvement does not change greatly as income rises. The 1956 range is from a low of $327 (17 per cent of total expenditures for goods and services) for households with income under $2,000, to $843 (19 per cent of total) for households with income between $4,000 and $5,000, and to $1,463 (18 per cent of total) for households with income of $10,000 and over.

The interpretation placed on these figures is that there is a remarkable homogeneity in the way the U. S. public now spends its money. A new "mass-class market" appears, consisting of the 63 per cent of U. S. families earning from $3,000-$10,000 a year, which accounts for 72 per cent of total consumer product expenditures.

Within this broad grouping everyone appears to spend in similar fashion—

XUM

rich and poor alike. Except in the case of food, beverages and tobacco, the various income levels spend approximately the same share of their total outlay in each of the major consumer goods classifications.

Putting the *Life* study income figures another way, of all the money spent by U. S. households on home operation and improvement in 1956, 19 per cent was spent by households with income under $3,000, 35 per cent was spent by households with income between $3,000, and $5,000, 37 per cent was spent by households with income between $5,000 and $10,000, 9 per cent was spent by households with income of $10,000 or more.

Geography and Spending

The top expenditures for home operation and improvement are made in the metropolitan areas (cities-suburbs) of the central states where the average figures is $947. Runners-up are the metropolitan areas of the western states with average expenditures of $882. The metropolitan areas of the Northeast and South follow with $858 and $760.

Families living in suburbs of big cities far outspend all others on home operation and improvement. Suburban families as a whole outspend those living in the central cities, but as between smaller cities and their suburbs the difference is slight. In central city areas of a half million or more population and their suburbs, the figures are $915 and $1,074 respectively.

In central city areas with less than a half million population and their suburbs, the respective figures are $748 and $772. In non-metropolitan areas the average 1956 expenditure is $574.

Educated Spend More

Spending for home operation and improvement rises consistently up the educational scale. Households whose head has had some college education spend an average of $1,124 (29 per cent of total expenditures), compared with $851 (25 per cent of total) spent by households whose head had only finished high school, and $656 (18 per cent of total) spent by grade school households.

This correlation between education and spending forecasts a growing market for products required for home operation and improvement, since today's huge school and college enrollment points with certainty to a better educated adult population in the future. This, plus the continuing shift to the high-spending suburbs, and economists' forecast of a 20 per cent rise in every family income by 1965, all add up to a bright future.

Occupation and Spending

By occupation groups, the largest expenditures for home operation and improvement — $1,156 — are made by families headed by professional and semi-professional workers. Families headed by business owners, managers and other executives, with average expenditures of $1,045 are runners-up. For the former group this represents 21 per cent of total spending; for the latter group it represents 19 per cent.

The age period of biggest spending for home operations and improvement is at the time when the head of the household is in his 30's. During this 10-year period average expenditure is

(Please turn to page 43)

Average Annual Household Expenditures by Annual Household Income

		ANNUAL HOUSEHOLD INCOME						
	All households	Under $2,000	$2,000-$2,999	$3,000-$3,999	$4,000-$4,999	$5,000-$6,999	$7,000-$9,999	$10,000 or more
Number of U.S. households	49,140,000	8,610,000	7,080,000	7,510,000	9,250,000	9,680,000	4,680,000	2,330,000
Average persons per household	*3.3*	*2.7*	*3.2*	*3.4*	*3.4*	*3.6*	*3.7*	*3.8*
Home Furnishings & Equipment—Total	$346	$132	$229	$286	$354	$458	$523	$809
Appliances (major	84	36	61	77	89	106	114	181
Appliances (smaller)	13	4	9	12	15	16	16	23
Bedding, linens	22	10	17	21	22	26	37	34
Dining equipment	7	2	4	8	6	8	11	20
Floor coverings (removable)	29	7	12	15	25	37	41	156
Furniture	62	15	40	47	62	85	119	150
Household waxes, polishes, cleaners	5	2	4	6	6	6	8	8
Laundry soaps & detergents	17	10	12	15	17	26	17	21
Tools, hardware	23	12	18	13	21	39	34	32
Other home furnishings & equipment	84	34	52	72	91	109	126	184
Home Operation & Improvement—Total	$763	$327	$588	$698	$843	$932	$1,086	$1,463
Basic materials	59	23	49	61	69	68	83	87
Communications	39	19	25	37	41	48	54	78
Home decoration materials	18	8	10	17	20	23	26	45
Home heating, utilities	153	70	117	154	172	194	181	268
Housing	442	194	359	401	493	544	627	758
Other home operation & improvement	52	13	28	28	48	55	115	227
Number of households in sample	*10,243*	*1,940*	*1,546*	*1,544*	*1,882*	*1,934*	*913*	*484*

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XUM

Dave Randall, son of Harold Randall, general commercial manager of General of Michigan, and Susan Perkins, daughter of Judson M. Perkins of the same company, inspect the USITA 60th anniversary cake which later appeared as part of the culminating observance at the USITA meeting at the Hilton in Chicago.

Michigan Holds 22nd Convention

By Dan S. Fargo

A NEAR-RECORD crowd attended the 22nd annual Michigan Independent Telephone Association convention in Grand Rapids on Sept. 18 and 19.

Talks ranged broadly over the telephone industry—merchandising, public relations, rate of growth, predictions of the industry's future, financing and Direct Distance Dialing (DDD)—and also included an engrossing discussion of what chemistry has done and may do to advance the telephone art.

Don K. Carlson, Morenci, association president, in his report of the year's highlights underscored the industry's need to merchandise. He also emphasized the importance of public relations, saying, "When your public understands you, then your public relations program is well begun."

Michigan's governor, G. Mennen Williams, brought birthday greetings on the occasion of the United States Independent Telephone Association's 60th anniversary. In the course of his talk, he stated he was happy that whereas certain gloom-mongers were decrying the flight of business from Michigan, the growth of Michigan's telephone industry indicated the opposite—a 60 per cent increase in plant investment in the last five years.

Fred B. Twigg of Lansing, association secretary, reporting the year's progress, said: "There are now only 118 Independent companies (in Michigan) due to 10 more consolidations—with 12 others in process. There were 22 conversions to dial—with 21 more scheduled for 1958; which means that at the end of 1958, nearly 75 per cent of exchanges operated by small companies will be on a dial basis. . . . The station growth to 71,000 among smaller Independents has been equally phenomenal."

Mr. Twigg noted that, notwithstanding the fact that Independent telephony in the state has made much progress, there is still much to be done if the whole public is to be served adequately. He said this includes the combined problems of (1) increases in revenue to meet rising costs and provide monies necessary to maintain plant and equipment without sacrificing rate of return, and (2) the problem of service in some areas.

For purposes of analysis, he divided the 117 Independents—exclusive of the General System—into 59 magneto operations, four common battery, and 54 automatic. The 63 manual operations provide service to about 20,409 subscribers or about 28.7 per cent of the total customer list exclusive of General.

Besides the 21 operations mentioned with plans to convert to automatic operation in 1958, two more are scheduled for conversion in 1959, and 21 others for 1960. Of the remaining 19 which have no plans for conversion in the foreseeable future, two are in the zero-to-100-station group; six in the 101-to-250 group; eight in the 251-500 group; two in the 751-1000 class, and one in the 1001-and-up category.

On the subject of the need for adequate revenues, Mr. Twigg stated:

"Usually, trouble starts from neglect or reluctance to keep revenues just a jump ahead of actual need. . . . The reluctance to do much in this department seems to stem from:

"(1) Fear of repercussion from users.

"(2) The trouble involved in making a case before the Michigan Public Service Commission.

"In either situation it would be well to remember the proverb: 'If you would have a hen lay, you must bear with her cackling.' Certainly, if you expect your operation to produce, you will have to contend with obstacles, and the only sure way to overcome them is be prepared with reason and logic."

"Chemistry's New Dimension" was

(Please turn to page 30)

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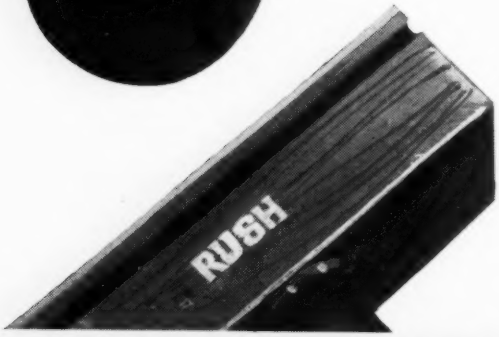

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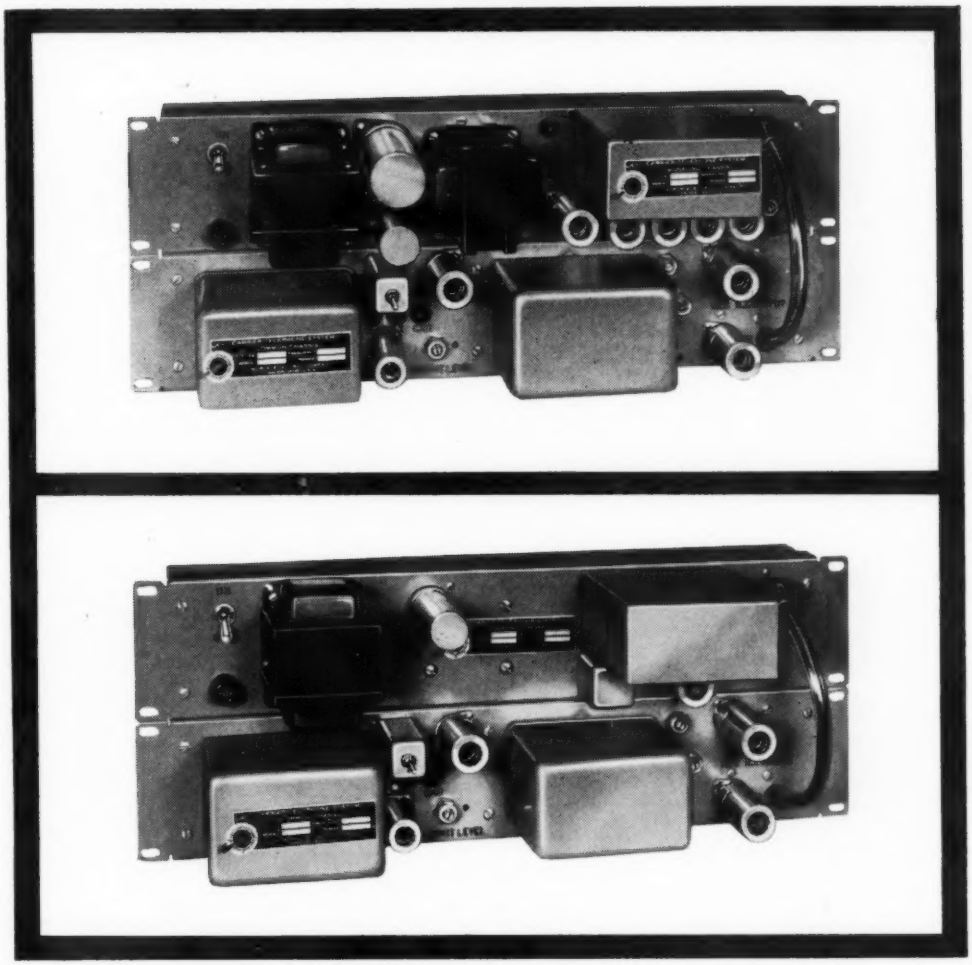

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NORTH

the subject of a combined talk and demonstration of plastics of interest to the telephone industry, given by Eugene E. Perrin, staff assistant of the Dow Chemical Co., and Harold A. Cook of Dow's public relations department.

They pointed out that the future of plastics in general is bright, and also that the perfection of new plastics often results in products which are improvements upon glass, wood, metals, etc.

Among the many examples of plastics described and passed through the audience were:

Wall tile—for inexpensive re-decoration—which may be attached with a mastic. (It was stated that various properties can be built into plastics —high impact strength, resistance to chemical action, etc.)

Styrofoam—a plastic blown to 40 times its original size, and which has individually sealed air holes, making it useful for insulation as well as other uses.

Plastic combinations, some of which paired vinyl and nylon for wall or seat coverings.

Plastics for telephone casings, finger wheels and push buttons, as well as polyethylene for wire and cable insulation.

It was stated that chemical companies, including Dow, have a vast number of plastics "on the shelf" awaiting a specific application, plastics which were discovered in the process of perfecting others. Therefore, Messrs. Perrin and Cook felt, there is no cause for concern about exhausting certain of our country's raw materials, since plastics have been or may be developed as substitutes.

"In the years which lie ahead the degree of success of any enterprise will be largely in proportion to the amount, scope and soundness of one's planning for the future," said Walter G. Wright, vice president-operations, General Telephone Corp., in prefacing his talk on "What Lies Ahead in Our Industry." He added:

"If enough of us really do some realistic long-term planning, we shall not only maintain but improve our relative position in the expanding economy of this country.

"I suppose the three most apparent factors affecting our planning for the future are the growth in population, the changes in living habits, and industrial developments. Many of you no doubt noticed the recent article in *U. S. News & World Report* (Aug. 9) which attempted to sectionalize by states the expected growth in population of 60 million amounting to 36 per cent over the next 20 years.

"Your state of Michigan was among those states with a relatively high percentage, showing 42 per cent. There

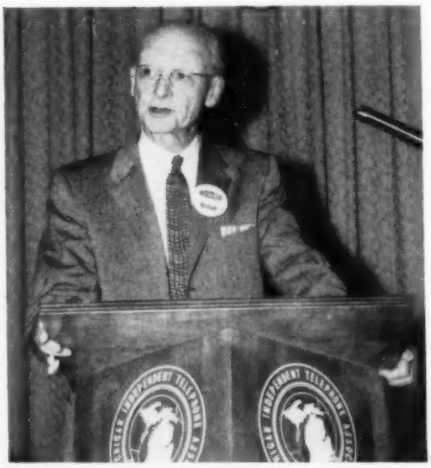
T. A. Saunders, Muskegon, president of General Telephone Co. of Michigan and treasurer of the Michigan Independent Telephone Association, presents his report.

is no question therefore but what our industry in Michigan has a problem lying ahead of proper long-term planning."

Mr. Wright said he believes that a reduction in unit cost of local plant facilities is essential to any realistic "looking into the future," since it becomes the controlling element in the amount of financing and added revenue necessary to meet customer communication needs and desires.

He also observed that "perhaps we in the operating field have been somewhat remiss by not being more explicit and demanding upon our suppliers as to what we think should be made available to us to meet the service demands we have experienced and are able to foresee."

A little later he said, "Our (Independent) interests lie primarily in the local service field and hence I trust the suppliers will put their greatest development efforts along those lines which will tend to reduce the investment in local exchange plant, including switching systems, distribution plant and subscriber equipment."



"Two Bank Accounts Instead of One" was the intriguing title of the talk by Burt H. Brandt, Michigan Bell Telephone Co.'s Independent company relations manager.

Another important source for reducing costs in the years ahead, said Mr. Wright, is improvements in operating efficiency by reviewing methods and procedures which in many instances could be bettered by the application of recent developments in office management techniques.

Mr. Wright listed and explained the following six fields in which he believes opportunities lie for major development providing costs can be lowered in these fields:

(1) Development of rural service by making individual line service available at lower costs by the application of radio and carrier techniques.

(2) Electronic switching systems.

(3) Concentrators.

(4) Application of carrier techniques to subscriber loops as well as to interoffice trunks.

(5) Redesign of local plant distribution to provide high frequency channels as an economical means of furnishing many specialized services.

(6) Redesign of subscriber equipment and signaling with a view to adding convenience for the customer in the progressively more cumbersome dialing requirements under Direct Distance Dialing (DDD).

"Two Bank Accounts Instead of One" was the title of the talk by B. H. Brandt, Independent company relations manager, Michigan Bell Telephone Co.

Mr. Brandt said he wondered whether his listeners fully realized the home-to-home importance of the telephone—that our meals may be improved with new recipes transmitted by telephone, or quicker recovery of a child may take place because of a neighbor's suggested remedy. These are but several instances of strengthening of community ties because of the real comfort and neighborliness that come from home-to-home calls, he said.

Mr. Brandt explained that every company has two bank accounts—one, the conventional "money" account; the other, a customer and community relations account. He then compared the latter account under two sets of conditions: first, with a fictitious company owner who was backward and thus showed a very low balance in the customer and community relations account; second, when the same owner became more progressive and forward-looking.

He went on to tell of a company which put on a program for a Lions Club, in a small automatic exchange town. A few opening remarks were

made about what the company was trying to do for the community and the growing investment necessary. The meeting was then thrown open for questions. They asked such questions as the following which showed their interest and their lack in basic knowledge of the telephone business, he said:

There is a cable back of my house—yet your girl said you had no cable pairs.

Why does it take two days just to install a telephone in my house?

I don't quite understand how my bill is figured.

How do you time a long distance call?

How do you know when the parties have finished talking?

How does long distance dialing work?

When will we get direct distance dialing?

When can I get an individual line?

Mr. Brandt commented that these merely indicate the many wonders and questions people have about our business and they appreciate our answering them. That program chairman said it was the most interesting and worthwhile program in years and, instead of adjourning at the usual 1:30, it was 2:30. Complaints in that town went down immediately because they now understood the local telephone problems, Mr. Brandt said. He also urged that the following be part of company public relations programs:

"Let's see our local newspapers, city fathers and chambers of commerce regularly. Tell them how many telephones we've added the last three months or a year—the lines we are adding or improving and the costs. Such items are evidence of the community growth and prosperity—those are the things they like to hear.

"Let's ask them if they have wind of any new business coming to town, real estate transactions or subdividing that could affect the telephone business. It is simple things like that which get us and our company respected as vital forces for community betterment.

"Being favorably known by the leaders in our territories is not only a rewarding experience but a valuable line of defense against unfair attack by the unthinking. . . .

"Publicizing our company name, its officers, its address and telephone number is often overlooked. Why shouldn't appropriate portions of such information appear prominently in our newspaper ads, on our company trucks, telephone directories, stationery, bill forms and bill inserts?

"Personal discussions, group meetings, advertising and publicizing our company are means by which to continuously tell our story. It has to be told and re-told because no two people necessarily get the same understanding from one telling."

Included in the report of the association's public relations committee by Judson M. Perkins, Muskegon, was a listing of the committee's projects: (1) Preparation of a press kit emphasizing the importance of the Independent telephone industry; (2) replacement of the current brochure on the Michigan Independent telephone industry, and (3) responsibility for the USITA 60th anniversary birthday cake (see photos)—to be shared with USITA.

Judson M. Perkins (left), director of public relations for General Telephone Co. of Michigan, welcomes Michigan Governor G. Mennen Williams to the convention proceedings. In background is USITA 60th anniversary cake which was shown at this meeting prior to its appearance at the national convention in Chicago.

"Direct Distance Dialing (DDD) for Independents" was discussed in a talk presented by James Gabriel of Muskegon. He stated that DDD will cut down traffic expense where companies have toll centers. Also, experience has shown that once DDD has been instituted, a company's toll business increases.

Mr. Gabriel said if DDD can't be justified on a revenue basis then the other alternative is on a service basis —service and revenue being the basis of all telephone company operations, with all phases, problems, etc., relating to these two.

Since DDD is the latest in service, he said, it is an advancement worth telling your subscribers about and it's a good sales point in a person-to-person selling campaign. However, he cautioned, don't expect DDD to be a cure-all for your problems.

Philip J. Lucier of the Stromberg-Carlson Co., speaking on "Small Telephone Company Financing," stated that the marginally-classed borrower is finding that there just are no funds available since money, even at 6 per cent, is scarce and therefore goes to the more efficient companies.

He pointed out that in the immediate postwar period demand for all new capital aggregated about 6 billion dollars a year, whereas in 1956 demand jumped to 11 billion dollars.

In connection with financing rural telephone development, he observed that the average rural multi-party rate is between $3.00 and $4.00, and said that in view of the high per-station investments of some companies (occasionally over $1,000), rural companies might be well-advised to raise rates to realistic levels. "I've never yet heard of anybody losing many subscribers due to a rate increase," he said.

Mr. Lucier then summarized the Stromberg-Carlson financing plan.

Edward L. Cadwell of Levering was elected a director of the association, replacing Lovell L. Cook of Bloomingdale, who resigned.

Other directors are:

K. W. Benckert of Muskegon; John W. Collver of Climax; John Fox of Waldron; L. W. Reynolds of Ontonagon; K. B. Sage of Central Lakes; John L. Sattler of Cedar; T. A. Saunders of Muskegon; R. J. Schafer of Pinconning; C. R. Smith of Port Hope, and P. E. Taylor of Pickford. Director at large: D. K. Carlson of Morenci.

The directors elected the following officers:

President, Mr. Carlson; vice president (upper peninsula), Mr. Reynolds; vice president (lower penisula), Mr. Smith; treasurer, Mr. Saunders; assistant treasurer, C. S. Boveri of Muskegon; secretary, F. B. Twigg of Lansing, and assistant secretary, Lee Magoon.

"Time," "Weather" Service Subject to Excise Tax

The Internal Revenue Service has ruled that firms which rent service from telephone companies in order to give time or weather reports, etc., for advertising purposes are subject to the 10 per cent excise tax (Internal Revenue Bulletin No. 1957-29).

It also has held that payments for leased communications services and facilities which are used solely to transmit private business information (such as leased wire, teletypewriter, or talking circuit special service) do not qualify for exemption from the communication tax, as do payments for service facilities utilized in dissemination of news for the public press. (Internal Revenue Bulletin No. 1957-37.)

XUM

Telephone installations show . . .

Where Polyethylene brings savings

INDIANA—A substantial saving in poles is evident in this rural area. The light weight of cable covered with polyethylene permits smaller poles, longer spans, faster installations. In many cases, cable can be strung without a messenger. Splicing has been greatly simplified.

The polyethylene covering has been found highly resistant to ice formation during the sleet storms common to northern Indiana. Where underground installations are made, polyethylene has eliminated the problem of electrolytic action in the soil. Installations in the near future will have much of this cable plowed underground, at a considerable saving.

WEST VIRGINIA—Installation of additional lines here in the mountains is a costly undertaking. Steep slopes overgrown with trees and brush make rights-of-way practically inaccessible to motorized equipment. In addition, holes for poles must often be blasted through rock.

Most of these problems are solved by distribution wire covered with lightweight polyethylene, now used almost exclusively in this area. This cable can be strung on existing poles, often without adding crossarms. Where lines are strung along railroads and near coal preparation plants, the chemical-resistant polyethylene promises protection from chemical fumes.

XUM

These field reports may help you evaluate the economies possible with polyethylene-insulated cable in your own installations. Taken together, they represent many years of experience with BAKELITE Brand Polyethylene under a variety of terrain and climatic conditions.

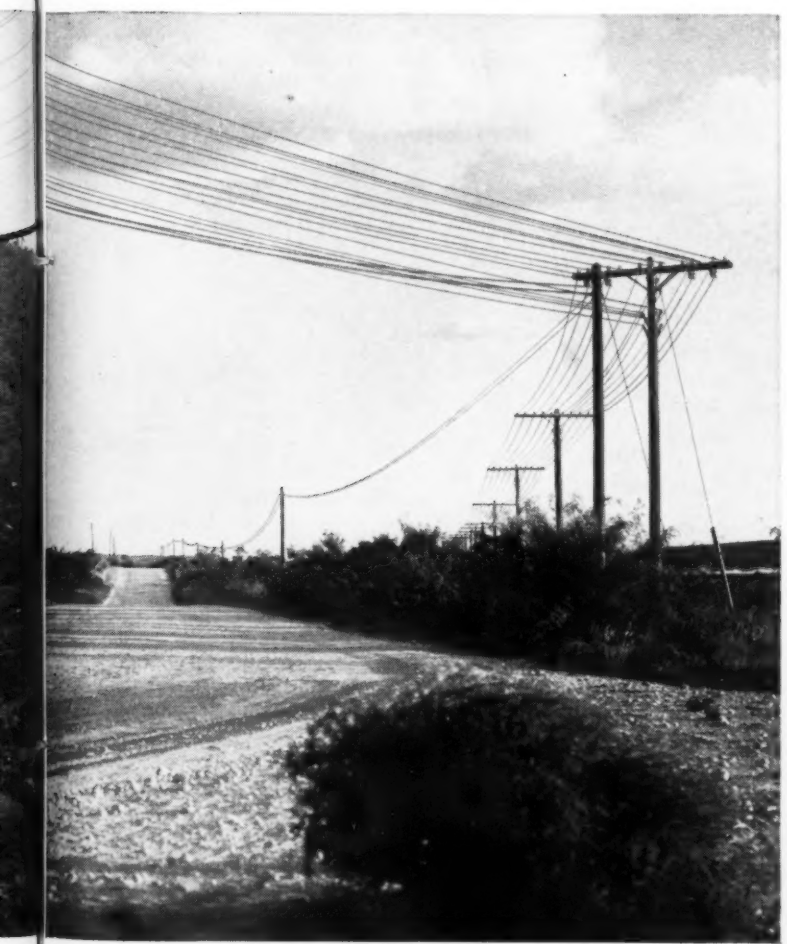
The light weight of this insulation has saved time and effort in installation; in fact, some installations would have been next to impossible with earlier materials. The moisture resistance of polyethylene has minimized weather hazards, while dielectric strength has far exceeded telephone requirements. The strength and flexibilty of polyethylene have simplified cable handling.

The growing acceptance of this material is shown by its use in coaxial cable and signal control cable as well as telephone line wire. BAKELITE Polyethylene satisfies REA requirements for plastic-covered telephone wire, IPCEA specifications for power cable, ASA standards for weatherproof wire, ASTM D1238-52T Type LL, dielectric materials, and IMSA specifications for fire alarm and signal control cable. For more information, write Dept. RH-180.

BAKELITE
BRAND
POLYETHYLENE

UNION CARBIDE

BAKELITE COMPANY, *Division of Union Carbide Corporation,* 30 East 42nd Street, New York 17, N. Y.
In Canada: Bakelite Company, Division of Union Carbide Canada Limited, Belleville, Ontario.
The terms BAKELITE and UNION CARBIDE are registered trade-marks of UCC.



TEXAS—These parallel telephone lines illustrate the savings possible with polyethylene-covered cable. Here, the new lines require ⅓ fewer poles as a result of the extremely light weight of the polyethylene.

Over a million pair-feet of polyethylene-covered cable are in service, and 70 million more are on order for this section, where climate ranges from semi-tropic to semi-desert. The polyethylene jacket must withstand heat, cold, wind, icy and arid conditions. When cable is placed underground, as in urban areas, the polyethylene resists corrosion by stray electric currents in the earth.

VIRGINIA—This terrain combines steep slopes and meadowland, much of it covered by sharp rocks. Problems include the difficulty of placing poles, the need to use only "overhead" rights-of-way at many points, and possible damage to ordinary cable covering if it comes into contact with the stony ground.

Under these circumstances, the lighter, tougher, more flexible polyethylene-covered cable was a distinct advantage. It permitted longer spans to stretch from hill to hill without poles in the fields. It was strung through blocks on the messenger in sections impassable to trucks. There was never any danger of its sagging to the ground and being cut on the rocks.

THE Plant Man's Notebook

BY RAY BLAIN, TECHNICAL EDITORIAL DIRECTOR

THE WRITER recently completed a course of instruction labeled "Personnel Management for Executives." This course was boiled down to 64 hours of intensive instruction from the long course of the Harvard School of Business Administration. We also were required to carry a heavy load of homework, much to the disgust of the dogs in the Blain household. The dogs thought it more desirable to have the customary after-dinner game of ball and, truthfully, we were inclined to agree with them.

Soon after the course began we learned that we should not be scared of its high-sounding title. It was explained to us that during recent years, industry and government have placed growing emphasis on the development of executive talent.

This emphasis results from recognition of the fact that as private and public organizations become more complex, greater executive ability is required to operate them.

More and more of the executive's attention is being directed to the management of people because the increasing complexity of operations spotlights the fact that the executive must rely on the combined efforts of many people associated with him in his organization.

The competent executive today is one who recognizes that the success of his organization depends on human cooperation. He wants his management team to be more expert in managing human resources, and his operating officials to be better personnel managers.

We were further advised that this course was designed to:

(1) Develop a broad perspective of the personnel management job in relation to the total management function.

(2) Improve insight into personnel management responsibilities of both operating and staff officials and their relationship to each other.

(3) Increase understanding of current developments in personnel management.

(4) Improve those human relations skills which make for effectiveness in managing people.

To accomplish these objectives, the course included:

Conference discussions. Aspects of personnel management were explored, with emphasis on those phases of personnel management programs which it is thought can help prevent, minimize, or solve management problems.

Work-group activities. Small work-groups of four to six persons attempted to define and analyze work problems of members of the group. Reports, with recommendations for action, were made to the class for further analysis and discussion.

Case discussions. Actual management situations of industry were used. These cases were analyzed to increase insight into managerial and human relations aspects involved and to consider various courses of constructive action.

General sessions. Guest speakers from government, universities, and industry, discussed current developments and trends in the personnel management field.

This course proved extremely interesting as well as enlightening and, in our opinion, should be useful for any telephone man or woman in management. We shall attempt to touch on a few of the high points of the course which should be of common interest.

First, we were taught that the 1920 concept of management will not prove effective today. Seventeen years of continuous prosperity have caused us to grow sloppy and careless in some respects. Then, also, the educational level has been raised so that the job of leadership has become more difficult. As evidence of this problem, there are at the present time a total of 82 colleges in this country conducting courses for middle-aged men.

It is claimed by management authorities that we are all capable of 30 to 60 per cent more productivity. Furthermore, we should all learn to work on and for the team as all great accomplishments are the product of groups and not individuals.

Perhaps you did not know that 80 per cent of all things that go wrong are due to people. This may have some bearing on the fact that over 85 per cent of all cases of managerial failure is due to a lack of human relations and not due to a lack of technical know-how.

It is a well-known fact that people all want to participate in things that affect them. They want recognition and an opportunity to grow. Observance of these principles will promote teamwork.

There is actually no difference between good management and good public relations. You can buy a man's time but not his will to work. People can think and they can be developed. Often an executive obtains obedience but not the cooperation of his subordinates. Any concern will pay for a training program whether they have it or not.

Successful organizations must have an atmosphere that generates faith instead of fear. Preservation of the dignity of man is most important in the development of loyal workers.

Supervisors never have the people they want. A good supervisor must recognize that all people are different. They must also develop sympathy and have the ability to place themselves in the other's position. If a supervisor does not develop people, he doesn't do a good job.

We should all feel that our job is most important and have a desire at all times to do a better job. We can't change facts, but it is our interpretation of facts that count. Promotion is the lubrication that makes a career system operate. The best qualified available person should always receive every consideration for promotion.

XUM

Perhaps the problems of today's executives can be summed up in the following passages quoted from the article "Ethics and the Executive" by Wayne G. Broehl Jr., in *Dun's Review and Modern Industry*, May 1957:

"The Suez crisis not only posed far-reaching political and economic problems; it also brought to the fore fundamental questions of ethics and morality.

"That these questions should be highlighted with such clarity on the world scene is of more than coincidental importance to the business executive. For never before has the American business community been so deeply concerned about its moral responsibilities to individuals and society.

"Today's executive is again and again putting himself and his corporation through a rigorous process of soul-searching on these questions. And slowly but surely he is helping to evolve what Adolph Berle, in his provocative 'Twentieth Century Capitalism,' calls the 'corporate conscience.'

"Almost unquestionably this concern for the 'moral decision' has been one of the key end-products of broader stock ownership and the wide use of the professional manager.

"A position of power often makes a person arrogant or pompous; successful administration of a complex organization can readily give a feeling of infallibility unjustified by facts.

"Over the long run, humility, kindness, trustworthiness cannot be projected unless they are genuine. And firm and lasting human relations can be effected only through application of principals within an ethical framework. A man who turns his human relations 'principles' on and off at will is usually found lacking over the long run.

"It would be presumptuous to set forth a 'handy list of personal values' that could be applied in any situation; in fact, the tendency to compile such lists is one of the major weaknesses in human relations training.

"But perhaps we may say this much: A man puts first that which he worships. If he worships power or influence, his day-by-day decisions will invariably reflect that fact, no matter how carefully he wraps them in cloaks of selflessness and service. And if he places first his religious faith, his decisions will reflect their religious base even if he tries to conceal it.

"Since all religions have a common ethical base, it does not matter for our case what his religion may be. What does matter is that any decision, big or small, be made in the conscious realization that it represents an entire value structure."

•

It has been said that you can always spot a well-informed man. His views always coincide with your own.

•

It has been said that everyone ought to fear to die until he has done something that will always live.

Fair Exhibit Pays Dividends In Public Relations, New Orders

By Robert P. Stratton*

EVERY day, telephone companies are striving to sell every possible revenue-producing service. The question is how to advertise their services to produce the best possible public relations while selling more telephone service.

The Chenango & Unadilla Telephone Corp., with headquarters at Norwich, N. Y., has just completed an advertising and public relations project with great success. We would like to pass along their story for its value to telephone companies looking for a "Fair" way of presenting their services to the general public.

The C&U company serves central New York state. Its headquarters, Norwich, is located in Chenango County. This county has a large rural population; therefore, the annual Chenango County Fair draws large crowds from miles around.

Several weeks ago, when the Chenango County Fair Association was shaping its yearly program of exhibits, the C&U advertising committee, composed of the executive vice-president, the chief engineer, the commercial manager and the purchasing agent, decided to rent a display booth 20x10 feet deep in the exhibition hall at the fair. This type of advertising and public relations project had never been tried by the C&U company.

The main purpose of the booth was to display and publicly demonstrate some of the newest telephone equipment. A trained staff was to be in attendance at the booth, prepared to answer questions, discuss rates, and actually take orders for telephone equipment. The staff was also trained to demonstrate all of the telephone equipment on display.

The advertising committee felt that an unusual prize should be given to some lucky person who visited their booth during the fair. After careful consideration they decided to award as a prize, one *free* five-minute telephone call to any place in the world.

Next, the advertising committee decided on telephone equipment to be used in the display—a Dialaphone, a telephone answering device, a hands-free telephone, a Gai-Phone, a set of two-line key telephones, two types of hard-of-hearing telephones, an outdoor booth as well as an attractive display of colored telephones.

Before the display booth could be used, it had to have repairs and a coat of orange paint, the company color. Telephone Advertising Institute posters were stapled on the walls, as well as a large sign referring to registration for the free telephone call. Posters giving comparative charges for gas, electric and water utilities service versus telephone service cost were also prominently displayed on the interior and exterior walls of the booth.

(Please turn to page 42)

*Mr. Stratton is assistant purchasing agent of the Chenango & Unadilla Telephone Corp.

Some 3,500 people signed for this prize, won by an English war bride who enjoyed a free transatlantic call "back home." In the two weeks following, 110 new service contracts were written from orders taken at the booth, and more are probable with follow-up.

DIALAPHONE

gives your subscribers push-button dialing!

With *Dialaphone* your subscriber makes calls faster, easier and more accurately. There's no hunting through a bulky directory. An indexed Directory Tape provides space for 850 separate listings. The subscriber simply turns a crank which spins the tape; when the name of the desired party appears in the View Frame, he presses the Starter Key and the call is completed *automatically*. The Directory Tape is prepared from a list which is supplied by the subscriber. Additional listings may be added to the tape at any time.

EQUIPPED FOR DDD

Because of the growing number of DDD (Direct Distance Dialing) installations using the nation-wide numbering plan, Dialaphone provides for up to 14 digits.

CHOICE OF 10 ATTRACTIVE COLORS!

We are now supplying the Dialaphone in all of our attractive telephone colors: Gardenia White, Camellia Pink, Forget-Me-Not Blue, Sunlight Yellow, Classic Ivory, Sand Beige, Garnet Red, Dawn Grey, Jade Green and Turquoise. We'll be glad to send you literature which gives further details. Call your Automatic representative or your nearest A. E. Sales Corporation warehouse.

STARTER KEY
After party has been selected —and dial tone heard—depress to start automatic dialing of call.

VIEW FRAME
Alphabetically indexed to provide quick finding of party.

HAND CRANK
Rotates Directory Tape through all five directory sections—Emergency, General, Classified, Long Distance and Frequent Use.

Automatic's 5 friendly warehouses:

George Ferguson, Mgr.
Northlake,
Illinois
Fillmore 5-7111

"Michie" Hester, Mgr.
2915 Moore St.
Richmond 21, Va.
Tel. 6-9280

Ed. J. Chok, Mgr.
2360 N. W. Quimby St.
Portland 10, Ore.
CApital 3-7244

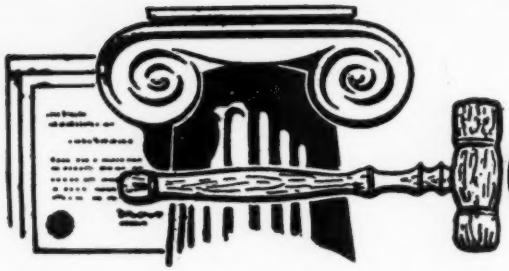
Fran Batcher, Mgr.
158 Corliss Avenue
Johnson City, N. Y.
Binghamton 7-8507

Robert Miller, Mgr.
2021 Main St.
Kansas City 8, Mo.
HArrison 1-4720

AUTOMATIC ELECTRIC

A member of the General Telephone System—One of America's great communications systems

GENERAL SYSTEM



Courts and Commissions

United of the West Asks Rate Raise in Wyoming

An application for increased rates was filed with the Wyoming Public Service Commission on Oct. 2 by the United Telephone Co. of the West (headquarters, Scottsbluff, Neb.).

The increase was the first asked by the company, formerly the Platte Valley Telephone Co., since it was granted an increase in April 1950.

The new application said present rates produce a 4.06 per cent rate of return on investment and that the company wants to put a new series of charges into effect that would produce a 7.25 per cent rate of return.

The proposed new rates would mean an additional gross income of $51,223.71 per year, based on business done during the year ended June 30. The new rates would raise gross revenue to $290,783, up from $239,559.73 received.

Four Loans Announced By Berkshire Life

Ralph G. Starke, assistant vice president of the Berkshire Life Insurance Co., Pittsfield, Mass., on Oct. 10 announced the following details of four mortgage loans in which the Berkshire company figured individually or on a shared basis:

Ogden Telephone Co., Spencerport, N. Y., has closed a 25-year first mortgage loan in the amount of $350,000 with Berkshire Life Insurance Co.

Purpose of the financing is to fund bank notes which had been incurred in connection with a conversion to automatic.

•

Western Carolina Telephone Co., Weaverville, N. C., has closed a $600,000 25-year first mortgage loan with Connecticut General Life Insurance Co., Hartford, Conn., and the Berkshire Life Insurance Co.

Proceeds of the loan are being applied to funding of bank loans incurred for expansion and improvements, including purchase of toll circuits.

This is the company's third bond issue arranged with Connecticut General and Berkshire.

•

Highland Telephone Co., Monroe, N. Y., has closed a $700,000 25-year first mortgage loan with Berkshire Life Insurance Co.; Fidelity Mutual Life Insurance Co., Philadelphia, Pa., and Bankers National Life Insurance Co., Montclair, N. J.

Proceeds of the loan are being used to repay bank loans incurred for improvements and extensions in its Goshen exchange area, acquired from New York Telephone Co.

•

Warwick Valley Telephone Co., Warwick, N. Y., has closed a $300,000 25-year first mortgage loan with Berkshire Life.

Proceeds of the loan are being applied to payment of bank loans and improvements and additions.

This is Berkshire's second loan to Warwick Valley Telephone Co.

New York Telephone Co. Gains $33,000,000 Raise

The New York Telephone Co. on Oct. 10 gained authority from the New York Public Service Commission to increase rates by 33 million dollars annually. (TELEPHONY, Dec. 1, 1956, p. 56).

The commission's ruling terminated one of the longest and most controversial rate proceedings in the history of the state's regulation of utilities. It started nearly four years ago with the company application for a $68,850,000 increase and was fought through the courts and the legislature, as well as four sets of commission hearings.

Keith S. McHugh, president of the New York Telephone Co., stated the company was keenly disappointed that the Public Service Commission "cut our rate request so sharply." But he added that "any rate relief helps."

Mr. McHugh said the commission's rate adjustments amounted to about one cent per day "for most residence telephone users."

"We first asked for an adjustment in rates in November 1953," he declared. "Now—nearly four years later—we are allowed only a part of what we then requested. And we can keep less than half of that, for 52 cents of each additional dollar must be paid to the federal government in taxes."

One of the major issues throughout the proceedings was whether the company was entitled to a rate of profit based on the original value of its plant or on the amount it would cost to reproduce that plant today in inflated dollars. The company insisted throughout that the "reproduction cost" figure should be used.

During the first series of commission hearings, evidence on reproduction cost was excluded over the objections of the utility. The courts later ruled that the commission should receive and consider such evidence. This was done in the last series of hearings.

But Commissioner Spencer B. Eddy held in an opinion unanimously approved by the commission that the evidence that the company offered on this question did not provide an accurate-enough basis on which to determine a justifiable rate increase.

Instead, Mr. Eddy ruled that current economic conditions warranted allowing the telephone company a 6.5 per cent return on the original cost of its investment, rather than the maximum of 6 per cent that had been allowed.

It was reported that the commission action appeared to wipe out a political issue that had caused inter-party battles for the last two years and had split the Republican party. It vindicated those who contended that state legislative action would not prevent the company from obtaining a substantial rate increase.

A bill with this intent was passed by the Assembly in the 1956 and 1957 regular sessions and at a special state legislative session last June, but was killed in the State Senate on all three occasions. Governor Harriman, who supported the measure, issued a statement after the commission ruling reemphasizing his position.

"With this decision," the governor

said, "it becomes more important than ever that legislation be passed to prevent future and totally unjustified increases in telephone rates.

"Legislation which would place the telephone company on the same basis for rate-making as the other public utilities has been blocked by a small coterie of willful Republican leaders in the Senate, who appear more interested in doing the bidding of the telephone company than in protecting the people they are elected to serve."

Commissioner Eddy's decision that the telephone company was entitled to a higher rate of return was based on the following two major factors: Higher interest rates that the utility must pay now to borrow money for expansion, and inflation that has increased construction costs.

Two Rate, Three Financing Requests OKd in Illinois

The following two requests for rate approval and three for financing have been granted by the Illinois Commerce Commission:

Alhambra-Grantfork Telephone Co. was allowed an $11,507.76 rate increase, affording a 2.2 per cent return on a $247,000 fair value rate base.

Crescent Telephone Co., Crescent City, secured a $7,991 raise which will produce a 4.9 per cent return on its $92,000 fair value rate base (TELEPHONY, July 20, p. 41).

Kaskaskia Valley Telephone Co., Patoka, was authorized to issue a $50,000 first mortgage note to Stromberg-Carlson Co., payable in 240 equal monthly installments.

Metamora Telephone Co. gained permission to issue $70,000 of first mortgage notes due Lutheran Mutual Life Insurance Co. of Waverly, Iowa, repayable over a 20-year period.

Suburban Telephone Co., Dunlap, received authority to issue 400 shares of $50 par common stock ($20,000) and also to borrow $135,000 from Stromberg-Carlson Co., repayable in 240 equal monthly installments.

Mountain States Requests Rate Adjustments in Idaho

The Idaho Public Utilities Commission on Nov. 12 is to hear an application filed by the Mountain States Telephone & Telegraph Co. to increase rates for local service and person-to-person calls and decrease some station-to-station rates.

The proposed new rate schedule would increase the company's net earnings by $55,000 per month, according to the application.

high visibility—illuminated

TELE-BOOTH SIGNS

INCREASE PAY STATION REVENUES OVER 25%*

The Tele-Booth Sign is designed for quick trouble-free installation *above* outdoor pay stations — UP where the increased range of visibility assures you that more people can *see* the sign—and, in turn, stop to "make the call."

Large white letters against a solid blue background (four square feet of sign surface on *each* side) are highly visible by day, brilliantly illuminated at night.

Tele-Booth Signs are built for the outdoors, sheathed in aluminum, faced on both sides with shatter-proof Plexiglas. Lettering and background are on the inside, will withstand extreme heat and cold. Will not fade, chip or peel.

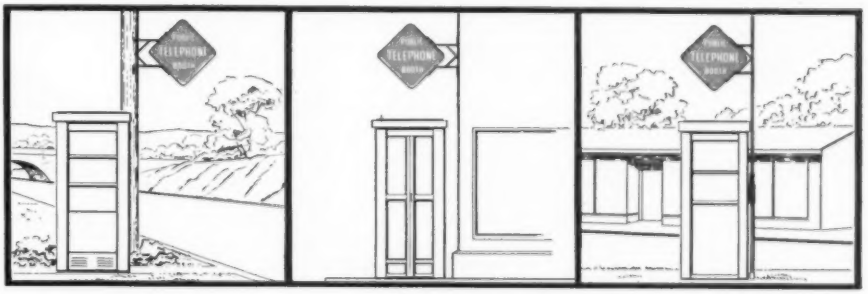
Heavy gauge galvanized brackets, welded to a reinforced frame permits solid mounting by clamp to standard utility service entrance mast or adjustable lag-screw mounting to wooden pole or adjacent building.

The Tele-Booth Sign is manufactured to exacting standards by Ad-Pact Corporation, suppliers of outdoor signs for RCA, Socony-Mobil, Miller Brewing, Maytag, Swift and other industry leaders. Ask your local distributor, who has full details on this sign, to order in any quantity from Ad-Pact Corporation.

"PROVE-IT-YOURSELF-PLAN":

Want to field test Tele-Booth Sign profit possibilities in your own territory, without obligation? Call or write Jim Signorile, Ad-Pact Corporation, Dept. AP, 271 Madison Ave., New York 16, ORegon 9-1060.

*** Actual Tele-Booth Sign installations have shown increased revenue of 25% or more per booth.**



SPECIFICATIONS:

SIZE: 2' High 2' Wide 5½" Deep

CONSTRUCTION: Formed aluminum case, insect proof, vented, access section for lamp replacement. Plexiglas sign face (two sides) all lettering and color permanently applied inside.

ILLUMINATION: Interior, four 58-watt incandescent lamps. Available with or without flasher. Fluorescent illumination in slightly larger size sign available. Optional, extra.

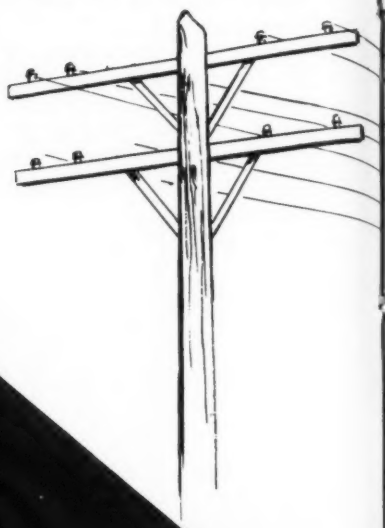
PACKING: Individually packed in carrier-approved carton, complete with hanging bracket and lamps. Shipping weight, 25 pounds.

UNDERWRITER APPROVED — UNION-MADE

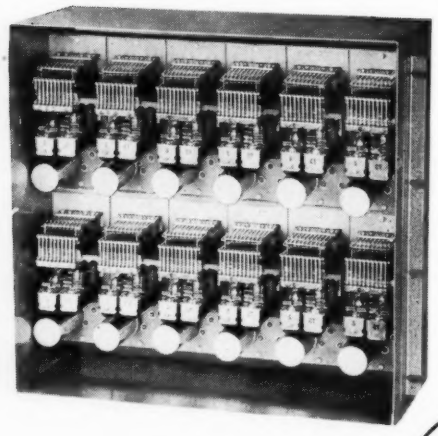
AD-PACT CORPORATION

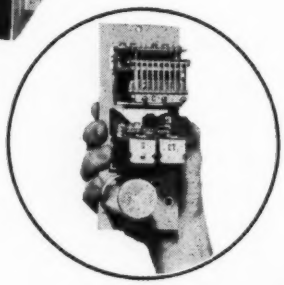
271 Madison Avenue • New York 16 • ORegon 9-1060
Plants: Pardeeville, Wisconsin • San Carlos, California

For *Modern* Party Line Operation →



Typical relay case
for Ringing Converter





Relative size of
unit assembly of
Ringing Converter

The UNIVERSAL
Code-to-Selective Ringing
Converter employs
simple circuits with the
magnetic impulse counter,
together with other
standard relay apparatus
of recognized
manufacture.

Other UNIVERSAL Telephone Equipment:
UNIVERSAL COMPUTER INTERCEPT
DIGIT ABSORBER for 2-5 Numbering

INDEPENDENT

XUM

"EASY TO INSTALL" UNIVERSAL RINGING CONVERTER!*

MODERN SERVICE DEMANDS SELECTIVE RINGING

Selective ringing has become a "must" to maintain customer relations, but the cost of modification of earlier dial units to full selective ringing is often excessive . . . in material, engineering and especially for the installation. The UNIVERSAL Code-to-Selective Ringing Converter unit is a simple applique circuit which places the majority of the wiring modification on a factory basis, thus reducing the installation time to a minimum. Most installations can be performed by maintenance personnel. Your company will benefit from increased revenue that can be expected with selective ringing because of increased station rates and increased party line fill.

*Pat. Pend.

TELEPHONE DIVISION

UNIVERSAL
CONTROLS CORPORATION
OFFICE AND PLANT – CARROLLTON, TEXAS
MAIL ADDRESS – P. O. BOX 13122, DALLAS 20, TEXAS

KELLOGG
A DIVISION OF IT&T
6650 S. CICERO, CHICAGO 38, ILLINOIS

SALES OFFICES

6000 W. 51ST. ST.
CHICAGO 38, ILL.

4501 TRUMAN ROAD
KANSAS CITY 1, MO.

23 BRODERICK ROAD
BURLINGAME, CALIF.

410 N. SYNDICATE AVE.
ST. PAUL 4, MINN.

1515 TURTLE CREEK BLVD.
DALLAS 7, TEXAS

1555 WEST FOURTH STREET
MANSFIELD, OHIO

1594 SOUTHLAND CIRCLE, N. W.
ATLANTA, GA.

165 PROSPECT STREET
PASSAIC, N. J.

Mail this coupon to the nearest address.

Gentlemen: I am interested in your Universal RINGING CONVERTER

Name _____

Position _____

Firm _____

Address _____

City _____ State _____

T-10-19

DEPARTMENT OF TECHNOLOGY
BUFFALO AND ERIE COUNTY PUBLIC LIBRARY

FAIR EXHIBIT PAYS DIVIDENDS

Concluded from page 35

Advance publicity was accomplished by using two-column eight-inch newspaper advertisements starting a month before the fair. These ads told the story of what was to be on display and told of the free five-minute call to any country in the world. The same story was used on the local radio station in brief spot announcements for a month before the fair began.

The greatest advance publicity for the telephone equipment display was derived from a blind ad in the local newspaper which read, "CURIOUS . . . Call 4-9065. If busy . . . try again later." If you had dialed 4-9065 you would have heard the following answer:

"Hello, this is an Electronic Secretary automatically answering your call at the Chenango & Unadilla Telephone Corp.

"You are invited to visit our equipment display in the exhibition hall during the great 1957 Chenango County Fair. Bring your whole family and all of your friends for an education in telephony.

"Many of the very latest improvements in telephone equipment will be shown and demonstrated by Kate Woodruff and her staff. See the beautiful and convenient colored extension telephones, the new automatic Dialaphone, the telephones for the hard-of-hearing, and don't forget to sign up at our booth for the free telephone call to any person in any country in the world.

"We will be looking for you at the fair. Thanks for calling."

This telephone number was the talk of Norwich in less than 24 hours. Altogether, over 4,800 calls were made to this number. Over 2,000 calls were received in the first two days. There were so many people trying to call the number of the Electronic Secretary that it was busy most of the time. After two days, the C&U inserted the following newspaper ad: "Thousands Have Called 4-9065. Sorry, if busy . . . try again later." After this ad, another surge of callers brought the total to 4,000 calls in four days. The balance of calls were from equipment demonstrations originating in our booth at the fair.

This advertising did a tremendous job for the C&U and its display at the Chenango County Fair. It also advertised the new Electronic Secretary and one way it could be utilized by the public.

The telephone equipment booth at the fair was a busy place with many interested people seeking demonstrations, asking rate questions, or just looking at the colored telephones. The staff gave out free yardsticks and telephone wall pads to the adults and yellow page ad balloons to the children. The Automatic Electric Corp., James Kilburg Corp., Stromberg-Carlson Co., and Sherron Metallic Corp. helped by sending appropriate literature, folders, advertising matches, colorful postcards, as well as helping to obtain the telephone equipment and display material in time for the fair.

An estimated 7,000 to 8,000 people visited the booth and saw the telephone equipment in operation. Public interest was great in the new items of equipment and, of course, the colored telephones drew many admiring looks. The project was a very pleasing success from both the advertising and public relations point of view, as the following statistics will show.

There were approximately 3,500 people who signed for the free five-minute telephone call to any place in the world. Out of the 3,500 signers, 936 people definitely asked to be contacted about colored extension telephones, change of equipment, special telephone equipment and Electronic Secretaries. The Chenango & Unadilla Telephone Corp. has been making the contracts as these people indicated on the slips signed at the display booth.

Two weeks after the fair, 110 new contracts for service were written from orders taken at the fair booth. There will undoubtedly be more after the 936 people are contacted. An interesting thing over and above the display is the fact that the C&U had rate increases pending for about a month before the fair. The public service commission approved the rate increase during the progress of the fair. It is interesting that no complaints were received from the thousands who visited the fair exhibit.

On the last day of the fair, in front of the grandstand, a winner was picked for the free five-minute telephone call. An English war bride won the call. She had never talked to her parents by transatlantic telephone since she came to this country. She called London, England, on Sept. 28, the date her brother was to be married.

The Chenango & Unadilla Telephone Corp. feels extremely proud of its part in sponsoring the free call to London for this typical American family as a part of its "Fair" program of advertising and public relations. More telephone companies should consider sponsoring similar programs.

Kansas Companies Given OK to Merge, Raise Rates

The Kansas Corporation Commission on Sept. 25 authorized the United Telephone Co. of Kansas, Inc. to take over operation of 13 southeast Kansas exchanges previously owned by McKrae Telephone Co. Inc.

The exchanges are Altamont, Altoona, Benedict, Buffalo, Burlington, Coyville, Fall River, Fredonia, LaFontaine, Neosho Falls, Piqua, Toronto and Quincy. Both United and McKrae are subsidiaries of the same holding company, United Utilities Inc. (TELEPHONY, Oct. 5, p. 35).

Haviland Telephone Co. was granted a $4,170 annual increase in rates for its Haviland and Wellsford-Coats exchanges which serve 513 customers.

Consolidated Telephone Co. Inc., Burrton, was allowed a $5,300 annual rate increase for the 512 customers of its Buhler exchange.

Sycamore Telephone Co. was authorized to cease business and Southwestern Bell Telephone Co., to take over the approximately 80 customers.

Commission Authorizes Sale Of Minnesota Properties

The Minnesota Railroad & Warehouse Commission has authorized the following:

On Oct. 4, sale of the following Minnesota properties of companies with headquarters in Garretson, S. D., to the Garretson (S. D.) Cooperative Telephone Association: Garretson Short Line Telephone Co., 6 stations; Rock Minnehaha Telephone Co., 40 stations; Koch Telephone Co., 20 stations, and Engelson Telephone Co., 21 stations.

On Oct. 7, sale of the entire property of Crow Wing Cooperative Rural Telephone Co., Brainerd, serving about 1,139 stations, to Consolidated Telephone Co., Brainerd.

Also on Oct. 7, sale of the Yellow Medicine County, Minn., properties (about 21 stations) owned by the Deuel Telephone Cooperative Association, Clear Lake, S. D., to Central Telephone Co., Fairmont, Minn.

General Company of Iowa Announces Rate Raise

The General Telephone Co. of Iowa has announced new rates for its Story City exchange.

As announced the rates, old and new are: Residence, one-party, $4.25 to $4.75; two-party, $3.50 to $3.75; business, $7.00 to $8.00; rural business, $5.00 to $6.00; rural residence, $3.25 to $3.90.

XUM

COMMUNICATIONS EXPENDITURES LOW

Concluded from page 26

$962, or 20 per cent of all spending for goods and services. Spending drops off to $814 when the household head is in his 40's and to $691 when he is 50 to 65.

Where there are children in the family, the largest expenditures for home operation and improvement are made during the years when the children are under 10. The figure is $895, or 19 per cent of all spending for goods and services.

The desire to own and consume goods exceeds the ability to earn with a substantial segment of Americans, the survey showed. In households with income of $4,000 a year or less, 47 per cent of all U. S. households, the typical family spends more than it earns. Part of the excess represents debts to be paid out of future earnings. Another part represents spending by retired persons living on savings.

Life confined its measurements to current expenditures for goods and services made by housekeeping households. To qualify as a separate household, a dwelling unit had to have at least its own mailbox, or entrance, or cooking facilities. Data was not collected on savings and income taxes, nor were expenditures such as downpayments on homes and purchases of stock. Emphasis is on those goods and services marketed through normal channels of distribution, and the totals also exclude outlays on gifts and contributions, educational expenditures, and vocation expenditures for accommodations and for travel.

Study Techniques

Life's market research director, Herbert Breseman, states that the *Life* study has already been in process for three years. After considerable planning and testing, actual field work began in October 1955 and concluded at the end of December 1956. During this period, interviewing was carried on daily—seven days a week, every week of the month, every month of the year.

The interview sample was selected on a strict probability basis to be representative of all U. S. households. Under this method the interviewer had no choice in the selection of households. There were 103 primary sampling units covering 191 counties.

Within each of the primary sampling units, smaller "locations" were selected through a random process. In total there were 2,340 such locations and one "segment," averaging about seven adjacent households, was selected at random from each location. These segments produced 10,243 households, with 24,112 individuals, in which interviews were completed. No substitutions or replacements were allowed at any time.

Each household in the sample was interviewed in four "waves." There was a four-week interval between waves and thus each household was interviewed over a 13-week period.

On the average, it took a total of eight hours of interviewing time to obtain the necessary information from each household. There were a total of 93,000 completed interviews.

As many as 11 call-backs were made in an attempt to complete a wave of questioning. If during the wave the household moved a reasonable distance, the interviewer went to the new address.

Sought Interviewer Rapport

During the study, according to Mr. Breseman, every effort was made to achieve a high degree of rapport between the interviewer and subject.

The individual interview was made more palatable by being spread over four periods.

Special questioning areas were devised dealing with family interests and activities (civic affairs, movies, sports, neighborhood, juvenile delinquency, hobbies, etc.), designed to enhance the questioning relationship.

Not only did this approach avoid the boredom in long interviews and remove the reluctance of households to divulge expenditure information, but it also provided sociological information which, with further analysis, may open up a whole new area for examining consumer expenditure and media markets, Breseman said.

The household purchase information was obtained by two techniques. Those expenditures which are relatively large and made infrequently, such as consumer durables, were obtained by the "recall" method with standard questions as to if, when and how many were bought and for how much. And, depending on the product, respondents were asked whether it was bought new or used, and whether a trade-in was involved. The recall period was varied with the item, from "within the last 12 months" for automobiles to three months for mortgage payments.

All other expenditures were collected by a technique which was a combination of a diary and recall aids and questions. On the fourth wave the interviewer left with the household a "daily record" in which all expenditures within the following 10-day period were to be entered. Careful instructions were given as to the use of the diary and the interviewer returned during the diary period to instruct or clarify further if necessary.

Interviewers were able to place and have completed over 90 per cent of the households during the fourth wave—in large measure the result of the rapport developed from the previous three waves of interviewing.

At no time during the interview cycle did either the interviewer or respondent know the identity of the study sponsor.

Another important factor in the high completion rate in the interviewing was the high calibre of the interviewing staff itself. A highly trained field staff of 280 worked full-time on the survey under close supervision and quality checks. Slightly over 40 per cent of the interviewers were male, more than half were under 40, and seven out of ten had a college education, Mr. Breseman stated.

Inquires concerning the findings in the "*Life* Study of Consumer Expenditures" should be directed to the Market Research Department, Life Magazine, 9 Rockefeller Plaza, New York City.

Ind. Telephone Association Holds District Meetings

Telephone personnel from 22 countries attended a luncheon meeting of District 5 of the Indiana Telephone Association in Fort Wayne on Oct. 23. The meeting is one of five annual district telephone meetings held throughout the state during October and November.

LaMar S. Stoops, vice-president, Nappanee Telephone Co., talked on "Planning for Future Growth and Modernization." Robert Miller, Fort Wayne, general commercial manager, General Telephone Co. of Indiana, Inc., spoke on "How to Increase Revenue."

Bechtel Winger, manager, Sweetser Rural Telephone Co., is president of District 5.

Co-Op Buys Kansas Company

The Kansas Corporation Commission on Oct. 9 approved the purchase of the Grinnel telephone exchange by S & T Telephone Cooperative Association, Brewster.

Name Iowa Company Manager

J. E. Templeman is the new district manager of the Tama-Toledo, Ia. division of Central Iowa Telephone Co. He has had 18 years experience in managerial capacities.

XUM

"The Strange Case of the Cosmic Rays"

NEXT IN THE BELL SYSTEM TV SCIENCE SERIES

Here is one of the most fascinating scientific "detective stories" of our time—"The Strange Case of the Cosmic Rays." It's the third program in the Bell System's widely acclaimed TV Science Series, which previously has brought you the informative and entertaining "Our Mr. Sun" and "Hemo the Magnificent."

"The Strange Case of the Cosmic Rays" will be presented to a coast-to-coast network television audience from 9 to 10 P.M., E.D.T., Friday, October 25, on NBC-TV.

Produced and directed by Frank Capra, the program stars Richard Carlson and Dr. Frank Baxter. It tells the absorbing story of the work of scientists in tracking down the cosmic rays and establishing their character and behavior.

Mr. Capra uses actors, cartoon animation, science motion pictures and puppets. Some of the most famous pictures in the physical sciences will be shown on television for the first time in this program.

As a partner in the telephone industry, the Bell System is proud to sponsor the Science Series. We hope that by showing the drama and excitement of science we can, in a modest way, help it to flourish and do even more for people everywhere.

See this special science telecast in full color and black and white on the NBC-TV network, 9-10 P. M., E.D.T., Friday, October 25. Check local listing for time and station.

Working together to bring people together
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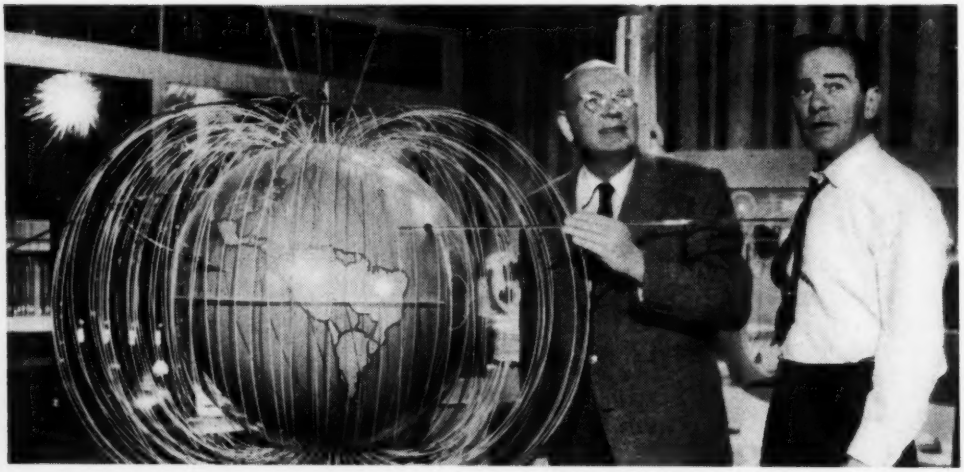
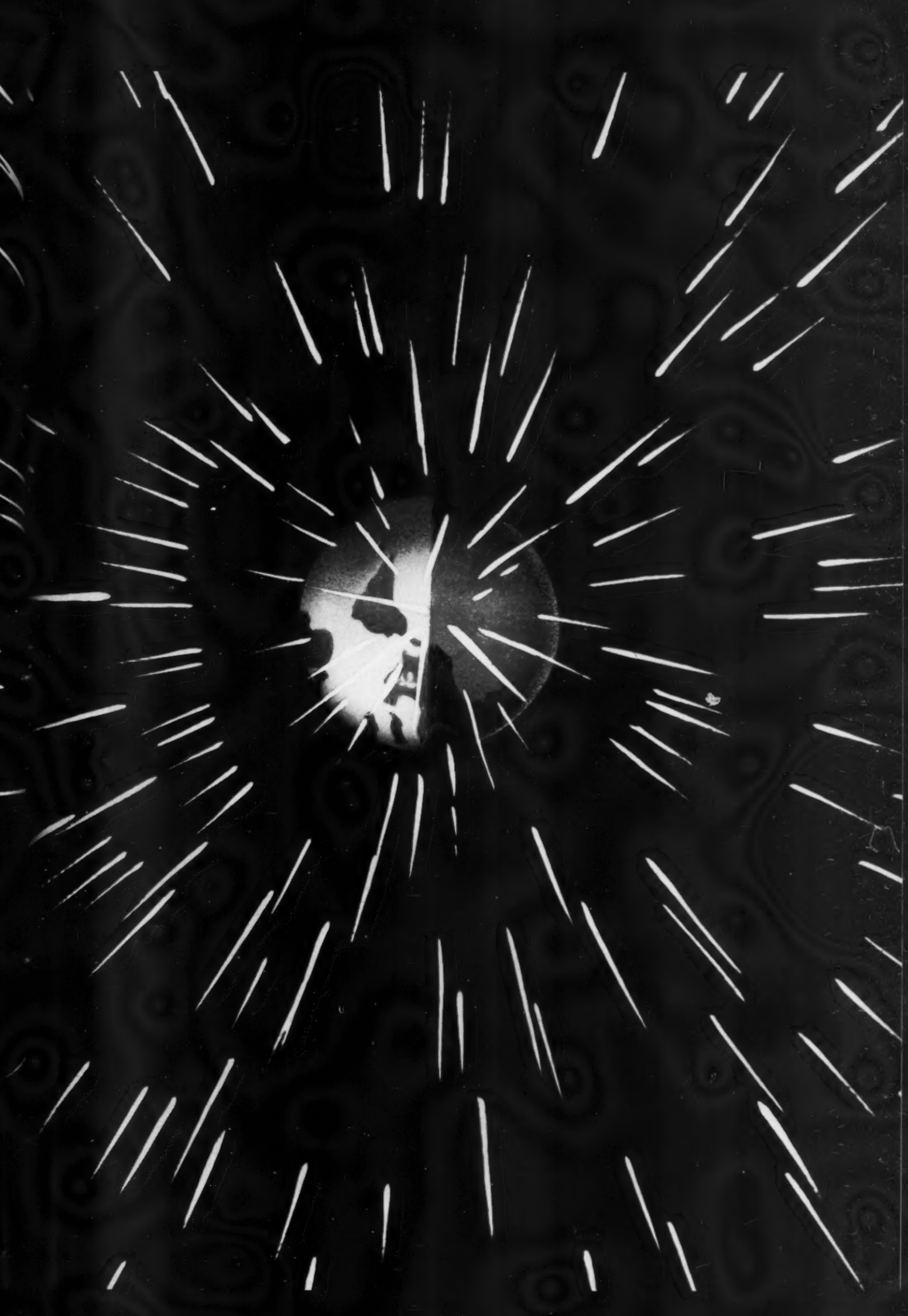


Dr. Frank Baxter (left) and Richard Carlson in a scene from "The Strange Case of the Cosmic Rays." Model of the earth and its magnetic field shows how cosmic rays are deflected as they hurtle in from outer space.



DESIGN AND OPERATION OF SMALL COMPANIES

Concluded from page 22

ments, or when additions to gas, water, and sewer facilities are made.

City or county approval of the original cable plan should be secured and a completed plan should be on file with the engineering offices of each at all times in order to eliminate the possibility of damage to cable from city or county construction projects, and the resulting high repair cost. This procedure will also minimize the possibility of high future maintenance costs in connection with the installation of municipal sewer and water additions or enlargements.

Admittedly, the cost of construction will be far greater if underground facilities were constructed instead of aerial. On the other hand, construction costs have increased steadily in the past several years and they probably will continue upward in the future, so that a detailed study should be given to the project from an economic standpoint. This study should consider the capital invested in the aerial lead, along with the plant sacrifice which will result if the lead is prematurely retired. These charges, plus the carrying charges of the aerial facilities for the period that the lead is in place, would reflect the actual cost of the aerial plant.

On the other hand, underground facilities constructed during the original rebuilding work would be cheaper than the same plant if it were built five or 10 years later. The carrying charges, however, would start from the time the plant is placed in service and would be higher than those on the aerial plant because of the higher underground costs. This gives a basis from which to study the problem and the final effect on the rate picture.

While the general public may not appreciate a higher original expenditure since, in many cases, it feels that the cost will be borne by the company, it is the obligation of the telephone company to keep rates as low as possible.

The starting point of construction and installation of all facilities, either aerial or underground, is the central office location so that the advisability of remaining at the old site or purchasing a new one should be governed by the service which can be given from each location, along with the cost of rendering it.

Locating the central office at the wire center of the city has, in the past, been a contributing factor in determining the location of the central office building. This has changed somewhat in recent years because of service demands which come from one or two directions.

If considerable distances are involved, such as to resort areas with their demands for the equivalent of urban service, it could result in transmission problems which could only be solved by additional equipment expenditures. Moving the central office site to reflect this new wire center is not a problem in unattended dial offices, but it would have a definite effect if a commercial office is involved.

While the maintenance of commercial and equipment offices at different locations would result in additional costs, the condition might be economical if the additional costs for long lines equipment and larger gauge cable were compared.

If the above problem did not exist, an office site purchased in other than a downtown, high-priced location might be advisable. Here the saving on the cost of land applied against the additional cost of facilities to the out-of-way location could make the move advisable. The out-of-way location would also facilitate company vehicle parking which might not be possible in the business district.

Depending on the location, it probably would be possible to construct a storeroom, a garage and even a pole yard at the new location. Also, space for future central office building additions probably would be available. It would also facilitate customer parking which, no doubt, would have a decidedly favorable effect on public relations.

These are some of the major and minor points to be considered before a rebuilding or rehabilitation program is put into effect. A company that does not adequately plan such a program can be compared to the man who built a two-bedroom home for his present family without considering the future growth possibilities.

[**EDITOR'S NOTE:** *This series will be continued in the Nov. 2 issue.*]

FREEDOM OF SPEECH FOR PUBLIC UTILITIES?

Concluded from page 19

before the commission and lost. It has tried its case in the state courts and lost. It is now appealing to public opinion.

What is wrong with that? Is it not the company's duty to protect the integrity of the service (and in the long run the interest of the telephone subscriber) by pointing out its conception of the true state of affairs? Regardless of whether the expense is paid by the ratepayers, as an operating charge, or by the stockholders as a capital charge, any fair-minded person would say that the telephone company's management does have such a duty. It would be remiss if it did not exercise its traditional right of freedom of speech.

When anti-business politicians speak in public, their speeches are news. They are carried in the newspapers without charge. Government officials engaged in a controversy with a business corporation generally have all the best of it, from a propaganda viewpoint. They can appear before friendly legislative committees where business witnesses are heckled. And after the hearings are over, they often go right into the committee rooms and argue the matter further. They can even put their arguments in the form of a report to the legislature—*at the expense of the taxpayer!* Everything an anti-business Congressman says on the floor of Congress is carried in the *Congressional Record.*

There is nothing wrong with this. Nothing improper. But what can a public utility do? It can only advertise and issue occasional statements. This is the only form of freedom of opinion left to it. Should it be taken away? The public' sense of fair play ought to give the answer.

But it should also be a course of satisfaction to these public utility managers that their publicity is making such an impression that their critics are hollering for a gag rule. It is not how much utility publicity costs but what the utilities are saying which is the real "turpentine under the regulatory saddle."

The moral of this story is that utility companies do have freedom of speech and of press under the law. And regardless of how it may be changed it is the duty of a utility company management to exercise that right for the protection of the public interest in the company's affairs.

Only an intolerable bigot, parading under a disguise of fake liberalism, could object to the exercise of that right, no matter how much he disagreed with what was said. Voltaire did not say "I will defend until death your right to agree with *me!*" A gag in the mouth of a public utility is just as un-American and unsporting as a gag in the mouth of anybody else. All are supposed to be equal under the law—or are they?

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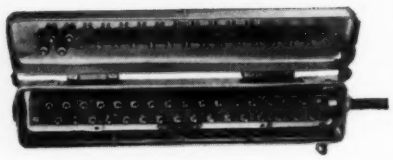
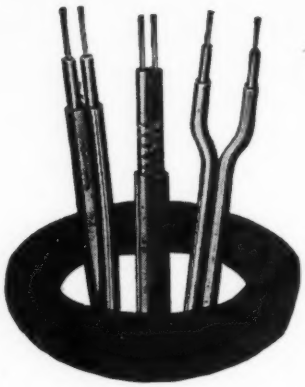
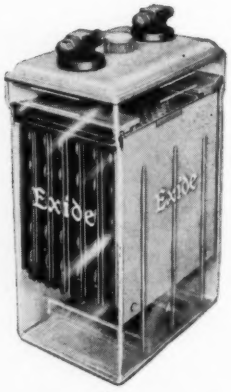


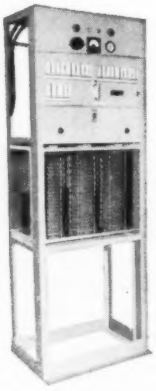
This Cook Stranterm is available in 6, 11, and 16 pair. The only strand-mounted Cable Terminal designed for a flexible system of Minigap or Mytigap protection. Supplied with either plastic or lead sheathed cable stub.
COOK ELECTRIC COMPANY.



Long Service Life and Low Plant Costs go hand in hand with the installation of ENDURPRENE — The Neoprene Drop Wire available in both Copperweld and Bronze. This flexible and easy-to-handle wire is made by GENERAL INSULATED WIRE WORKS, INC.



The Battery That Stays Young for Years. Built right into the Exide-Manchex Battery is a reserve supply of lead that converts automatically to active material as it's needed during the battery's long life. Hence, it keeps its full capacity for years. Exide Industrial Division, THE ELECTRIC STORAGE BATTERY COMPANY.



Air Compressor Dehydrator for supplying dry air to aerial and underground cables. Supplies up to 40 cables. Individual air flow indicators for each cable. Both automatic and manual units are available.
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No delays when you order from Kellogg! An experienced professional telephone man handles your order promptly. You know you are getting the best, too. 60 Years of experience stands behind the selection of these line supplies.

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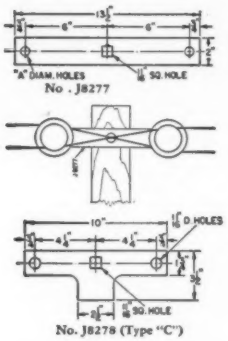

Joslyn Tandem Transposition Brackets—Joslyn J8277 and J8278 hot dip, galvanized Transposition Brackets used with No. H56 glass transposition insulators. The J8278 has a protruding supporting section for use on angles in the line. Insulator pins, glass insulators, and ⅝-inch bolts for mounting to the crossarm should be ordered separately.

JOSLYN MFG. & SUPPLY COMPANY.

New 48-Volt Battery Charger Line. Completely redesigned Raytheon Recti-Chargers (R) feature no load to full load regulation of ±1%, no tubes, automatic compensation for rectifier aging, no audible hum. Most compact units on the market—single and three phase, output from 30 to 400 amperes. RAYTHEON MANUFACTURING COMPANY.

Shallcross No. 6100 Wheatstone Bridge—This portable instrument is designed to measure any resistance from 1 ohm to 1 megohm; locate grounds, crosses, opens, and shorts by the Murray, Varley, Hillborn or Fisher Loop and Capacitance tests. Can be operated by repairman wearing gloves.

SHALLCROSS MFG. COMPANY.

Kellogg's Standard Outside Plant Handbook now available at special price while quantities last. Reduced to $2.75 a copy, with ten or more copies priced at $2.50 each. Every phase of outside plant telephone pole line construction is covered in book.

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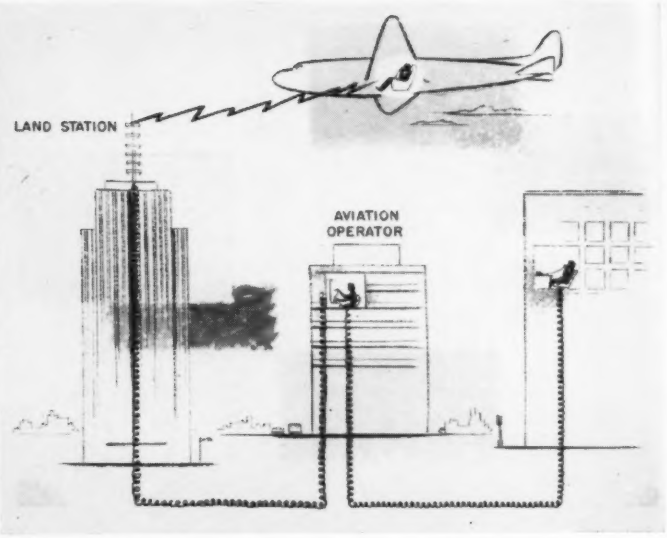


LEFT PHOTO: K. V. Glentzer, Illinois Bell Telephone Co. radio and special services engineer, makes one of the first calls from an airplane as year-long tests of air-to-ground telephoning open. Glentzer made the call to O. G. Smith, Illinois Bell's chief engineer. Both were highly complimentary about the transmission and future of this type of service. RIGHT: Sketch showing how telephone call from passenger aboard plane in Chicago area to his home will be handled. Call will go through telephone company's antenna atop a tall Chicago building, then through a special aviation operator at company headquarters, who will make the connection to called party.

Air-to-Ground Service Begun on Trial Basis

Telephone service for airplane passengers was opened on Sept. 15 on a trial basis over the Chicago and Detroit areas, Illinois Bell Telephone Co. announces.

Participating in the year-long tests of air-ground telephoning are one government and 11 private planes. Passengers aboard these planes can be connected to home or office telephones while flying above the Chicago-Detroit vicinity. Thus, Husband John can call Wife Mary to tell her he'll be flying in for dinner at 6.

The experimental service was authorized last April by the Federal Communications Commission for a one-year period (TELEPHONY, May 4, p. 52).

"The objective is to determine the feasibility of establishing regular air-ground public telephone service on a more widespread basis," K. V. Glentzer, Illinois Bell radio and special services engineer, says.

Radio-telephone units aboard the planes, will be connected to the nationwide telephone system via ground radio stations operated by Illinois Bell and Michigan Bell Telephone Co. Special "aviation operators" will make the connections.

In making an air-ground call, a plane passenger presses a push-talk button on his air-borne telephone. This sends a signal to a base station and thence to a special aviation switchboard operator. Upon reaching the operator, the passenger gives her the number he wishes to call and makes the connection. For ground-to-air service the procedure is reversed.

Illinois Bell's radio antenna, used for this service, is on a mast already used for vehicular radio-telephone service. It is located atop a 550-foot building in Chicago. Aviation operators will be at a switchboard in Illinois Bell's Chicago headquarters.

The telephone companies are using, on a temporary basis, two radio frequencies on an unused common carrier channel previously assigned to land mobile telephone service. Since only one channel will be used for the experiment, only one conversation may take place at one time through each base station.

The airborne communications equipment in the initial test service consists of small lightweight sets manufactured by AC spark plug division of General Motors Corp. and Motorola, Inc. Other manufacturers expected to provide units later in the tests include Bendix Aviation Corp. and Radio Corp. of America.

Rates for the one-year trial service will range between $1.50 and $5.25 for a three-minute call, depending on the location of the plane and the other party that is calling or being called. For example, a call between an airplane over Milwaukee and a Chicago telephone would cost $1.50 for the first three minutes. Both parties are located within the same zone.

On a call between a plane over Cleveland and a Chicago telephone the charge would be $2.15 for the first three minutes because the call would be from one zone to another.

Kentucky Co. Announces Two New Appointments

Two new officials have joined the Northeastern Telephone Corp. of London, Ky.

Wallace C. Olson is now at the Chicago headquarters office as assistant to Perry D. Woodward, executive vice president. Roy McClure has been named director of public relations for the company with headquarters at London, where Northeastern has its southern district headquarters.

Mr. Olson has been with Pillsbury Mills, Inc. for the past five years—the last two as assistant manager of the Chicago office. He graduated from Willmar (Minn.) High School in 1946. From 1946 to 1948 he was in the Army. In 1952, he graduated from Gustavus Adolphus College, St. Peter, Minn.

Mr. McClure came to Northeastern from editorship of the Mt. Vernon, (Ky.) *Signal*. Prior to that time he held reporting and editor positions on newspapers in Kentucky, Illinois and California.

Mr. McClure attended Mt. Vernon High School and graduated from the University of Kentucky. He spent four years in the Army during World War II mostly in the Pacific Theatre of operations.

Kan. Company Incorporates

Belle Plaine Telephone Co. completed incorporation as a telephone public utility on Oct. 7 in the Kansas secretary of state's office, it was reported. Paul R. Saunders is resident agent for the new corporation.

BICC execute Major Telecommunication Projects ANYWHERE IN THE WORLD

Consult BICC about the Planning Manufacture and Installation of Telecommunication Projects.

We have had long experience in this kind of work in many parts of the World. A few of our recent contracts are briefly described below.

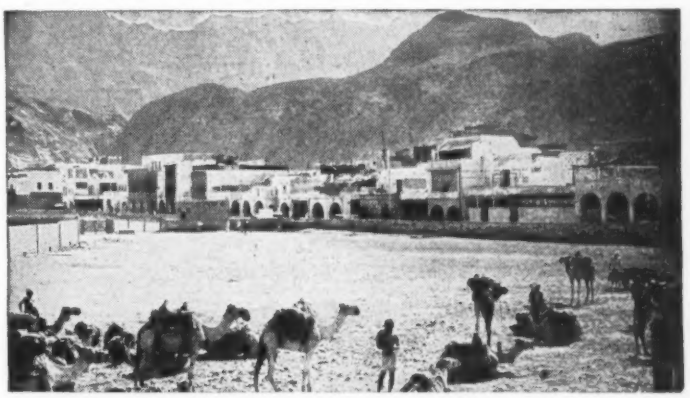
The following types of BICC Cable are in continuous manufacture for telephone administrations in many countries: coaxial and balanced pair cables for carrier working, long-distance audio cables, paper or polythene insulated exchange-area distribution cables.

We shall be pleased to give you further information from our nearest Branch Office or from our Headquarters in London.

AUSTRALIA *Electrification of the New South Wales Railway Western Line has necessitated a completely new track-side cable scheme covering the 34 miles from Sydney to Penrith. The main cable comprises 6 pairs for 24 channel carrier working and 60 audio pairs for local telephone and control purposes. Many of the audio pairs are terminated at railway stations, signal huts, power substations, etc., in order to provide local facilities. The installation was undertaken by BIC Construction Co. for the N.S.W. Railways Department, the cable being manufactured by BICC.*

NEW ZEALAND *BICC have supplied a long-distance cable between Auckland and Hamilton for the New Zealand Post and Telegraph Department. BIC Construction Co. supervised the installation and undertook the progress and transmission testing. The cable consists of 4 coaxial tubes to provide long-distance carrier or television circuits, together with a surrounding layer of 54 audio pairs for intermediate local circuits. The pairs are loaded. The cable is buried direct in the ground for most of its eighty-mile route, except when passing through towns where it is laid in ducts.*

VENEZUELA *BIC Construction Co. have undertaken the jointing and supervision of installation of a 448 pair 20 lb. long-distance audio cable to improve the telephone service between Caracas and Maiquetia. With a route length of approximately seventeen miles, the cable runs wholly in ducts along the side of a newly-constructed auto-road linking the capital town of Caracas with the coast. This contract has been undertaken for the Compania Anonima Nacional Telefonos de Venezuela, the cable being manufactured by BICC.*

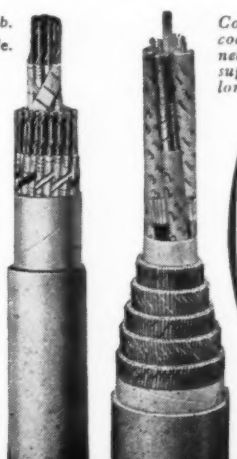


ADEN *To extend existing facilities and to cater for the Colony's growth, a new distribution network has been installed comprising approximately 44 miles of BICC cables specially protected against soil corrosion.*
The new network provides an increase of 3,000 lines and consists of paper-insulated local distribution cables ranging from 15 to 200 pairs, the larger sizes being of the unit twin type. A short balanced and loaded audio cable was also installed to link the Town with the new refinery site at Little Aden. This contract was undertaken for the Aden Posts and Telegraph Department.

Left: a BICC jointer at work on a coaxial cable, cutting the tubes ready for jointing. Two typical cables for carrier working are illustrated on right.

BICC manufacture every type of telecommunication cable and undertake their installation—anywhere.

24 channel 24 pair 40 lb. carrier telephone cable.



Composite cable with 4 coaxial tubes for 960-channel or television, with 18 supervisory pairs and 390 long-distance audio pairs.

BICC

***Planning • Manufacture • Installation for* TELECOMMUNICATION SYSTEMS**

BRITISH INSULATED CALLENDER'S CABLES LIMITED
21, Bloomsbury Street, London, W.C.1, England

XUM

construction and maintenance DIGEST

- Tailor-made
- Block that bolt
- Easy dead-ends
- 3 ways better
- Power for long life

Published regularly to help you get the most out of your materials and supplies dollar

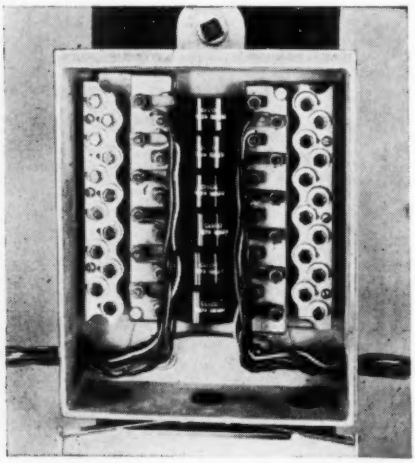
by Walter G. Baum, Office Mgr. and Inside Sales—Kansas City

Although I'm from Missouri, nobody has to show me how much careful attention is paid to your supply needs at Stromberg-Carlson. You might be interested to hear why. Well, these orders of yours for parts and equipment, actually help further the science of telephony. We're up to our neck in this industry as a full-time job. We appreciate your support—because your supply business plays a major role in helping us continue our research for new and better telephone equipment—**for you.**

Winning Combination

You get a combination terminal box and housing for loading coils with the CEECO Type 177 Terminal-Loading Case.

Sturdily made of cast aluminum by Communication Equipment and Engineering Company, it is designed for use with the new rural distribution wire for 6, 11 and 16 pair capacity.

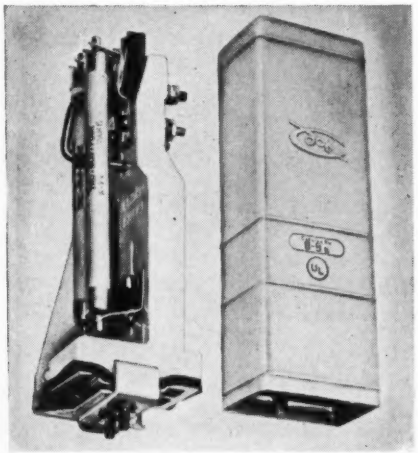


Available in 8 types to meet your needs.

The terminals are designed to accommodate loading coils of 88MH or 44MH inductance. You may order them with or without protectors.

Protect telephones from lightning

No larger than a good-size candy bar is the Cook 09u telephone protector shown here. But it can save you a lot of grief and you can protect single circuits, both indoor and out.



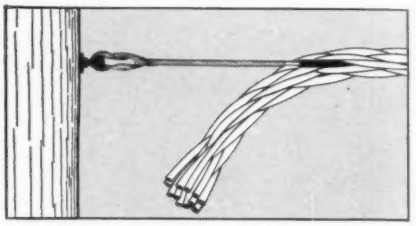
Individual circuits are protected by small unit, measuring 6¼" x 2¼" x 1¾".

The body is a single piece of heavy white glazed porcelain. Lightning arrestors are two Tru-Gap dischargers, two flat carbons mounted on a copper ground strip, and A-9u 7-amp. lavite fuses. Neoprene gasket locks out insects, dust, snow, etc.

These dead-ends need no bolts

Your most inexperienced lineman, using the Preformed Dead-End, can make dead-ends faster and easier than an old hand using old-fashioned dead-ends.

No bolts, no special tools are needed. You eliminate costly loops, and your dead-end exceeds the strength of the wire or cable, even under sudden impact. It never relaxes its grip.



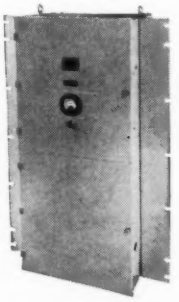
Available in galvanized steel, copperweld, stainless steel and bronze.

The Preformed Dead-End can be applied around an insulator, or inserted through thimble eye.

Available for self-supporting plastic cable, telephone line wires, rural distribution cable, and open wire.

Raytheon Rectricharger® Battery Chargers—Complete Line 3-400 Amperes

Entirely redesigned new Raytheon Rectichargers offer three major improvements:



New Raytheon battery chargers feature ± 1% no-load to full-load regulation

1. ± 1% no-load to full-load stabilization prevents battery overcharging, minimizes gassing, lengthens battery life.
2. No audible hum at output terminals.
3. Most compact units on the market—wall or rack mounted.

Automatically compensated for rectifier aging, Rectichargers offer high efficiency, completely automatic regulation. No moving parts and self-protecting circuitry assure minimum maintenance, long life. Single and three phase, 3-400 amps.

Built by Raytheon, supplied to you by your Stromberg-Carlson representative.

XUM

Battery life prolonged by strong plates.

The Exide-Tytex Battery is a flat plate type specially designed to give long life. In addition, it offers the advantages of high capacity in relatively small size. Hence it is preferred in many telephone applications.

One of the most important features of the Exide Tytex Battery is the construction of the positive plate. The exclusive, patented Silvium grid resists corrosion—prolongs battery life. Specially shaped horizontal grid bars lock the active material firmly to the plate while presenting only a minimum of exposed metal to the electrolyte. This also effectively shields the grid against corrosion and at the same time insures that every plate will have a maximum of active material in contact with the electrolyte—for higher capacity. Every fifth horizontal bar is 300% thicker in order to give the plates extra strength.

Molded plastic jars require considerably less space than needed by conventional cells. This makes it possible to put more battery capacity into a given amount of shelf area.

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STROMBERG-CARLSON

A DIVISION OF GENERAL DYNAMICS CORPORATION

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United of Indiana Honors Retiring Chief Operator

The United Telephone Co. of Indiana Inc. on Sept. 28 paid tribute to their traveling chief operator, Marie Jellison, at a retirement party held in Warsaw. The party was attended by hundreds of her fellow employes and connecting company friends, who presented many gifts in testimony of their friendship and affection.

F. J. Eherenman, general commercial supervisor for United Telephone Co. of Indiana, sends the following story of Miss Jellison's career:

"In August 1910, a young lady in Portland, Ind., flipped a coin to decide between two jobs that had been offered to her. The turn of the coin probably deprived the world of an outstanding soda jerker, but at the same time it started Marie Jellison on a telephone career covering a span of nearly half a century.

" 'Jelly' began her career as an operator on an eight-position local switchboard for the Home Telephone Co. in Portland. Within three months she had graduated to the two-position toll board, because, as she puts it, toll operators in those days were chosen on the basis of legible penmanship and strong voices.

"In less than a year Portland's 'collector' became ill, and Miss Jellison was assigned to the position, which involved a door-to-door canvass of all subscribers each month. Her salary was increased at this time to $27.50 per month.

"By the time she was 20 years of age, Marie Jellison had been promoted to the position of chief operator at Portland, and she held this position for 17 years. During this time she saw many changes. Wood stoves, fired by the operators, were replaced by coal stoves. Troublemen swapped their horses and buggies for motorcycles, and at Portland the magneto switchboard was replaced by a common battery board. Female employes were easily recruited, and they usually stayed on the job for years.

"Life then was so serene that Miss Jellison even found time to take over the job of wire chief for a while at Portland until a male replacement could be trained.

"In 1927 the Home Telephone Co. was purchased by the Interstate Telephone Co., which owned several properties in Indiana and Ohio. Soon Miss Jellison became an office manager at Portland with jurisdiction over the Ohio properties.

"In 1931 the Interstate holdings were sold to United Telephone Co., and in 1934, during the bleak days of the Depression, Miss Jellison was given an automobile and asked to improve collections throughout her company's exchanges.

"Her traveling job which was to last three months has, in reality, lasted 23 years. Since 1935 she has been traveling chief operator for United Telephone Co. of Indiana, Inc., whose headquarters are now at Warsaw.

"Through the hectic days of World War II, when help was at a premium, Miss Jellison often worked 24 hours at a time, driving from one exchange to another, to help wherever she was needed.

" 'Jelly' will continue to maintain a residence in Dayton, O."

MARIE JELLISON

Marjorie May, chief operator at United's Portland exchange until about 20 months ago, has been Miss Jellison's understudy and will now fill the vacancy left by her retirement. Miss May began her telephone career as a student operator at Portland on April 9, 1940, later advanced through the supervisory ranks and became Portland chief operator in 1952.

General System Announces Organizational Changes

Several organizational changes within General Telephone System were announced in New York by General Telephone System's president, Donald C. Power.

Carl J. Lohman, who is currently personnel director for General Telephone Co. of Illinois, will be transferred to General Telephone Service Corp. in New York City as safety director, effective Nov. 1. Mr. Lohman previously worked in the commercial department and the plant department of General Telephone Co. of Illinois prior to his appointment as personnel director for that company. In his new assignment as safety director, Mr. Lohman will be a member of the operations department, reporting to W. G. Wright, vice president—operations.

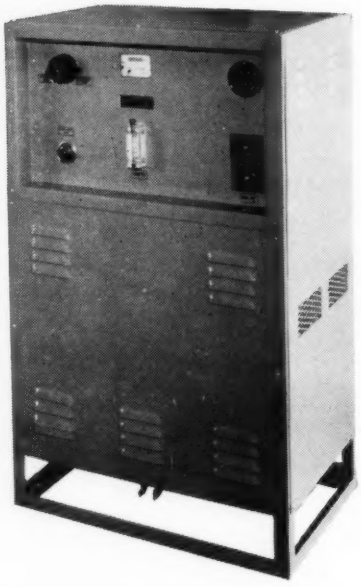
James L. Malone, who is currently personnel administrator at General Telephone Service Corp., will be transferred to General Telephone Co. of Illinois as personnel director, effective Oct. 16. Since joining General Telephone System, Mr. Malone has had assignments as personnel director at In-

XUM

for your cable maintenance needs

S&G MANUFACTURING CORP.

presents . . .

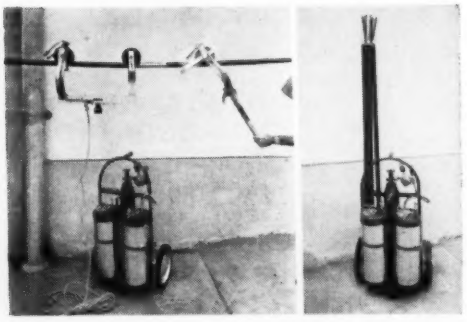


MODEL A
Air Compressor Dehydrator

Exchange equipment designed to supply chemically dry air for telephone cables, aerial and underground, this unit can supply as many as 30 cables. The unit is equipped with volume recording air meter, high and low pressure alarm switches, humidstat and hour meter.

- **Completely automatic in operation**
- **Air Purifier to eliminate oil mist**
- **Incorporates the latest safety devices**

LEAK DETECTOR APPLICATORS



- **Castings — aluminum for light weight**
- **Safety Brackets—steel galvanized**
- **Nozzle and Piping—brass**
- **Liquid Line—heavy wall plastic tubing**
- **Liquid Tank—steel galvanized and brass fittings**
- **Wheel — nylon bearings, self-lubricating**

Applicators use a highly successful chemical type leak detector. Dual nozzles spray all sides of pressurized cable. Bubble cluster forms around leak within minutes and can be clearly seen from the ground. Air pressure bottle in cart supplies regulated pressure in solution tank at all times, can be adjusted for different height cables. For further information on this equipment, as well as the famous S & G Mobile Power Unit and Maintenance Generators . . .

write or phone

S & G MANUFACTURING CORPORATION
P. O. Box 1309 • New Orleans 10, La. • RAymond 3142

diana, and wage and salary administrator for General Telephone Service Corp. In his new assignment, Mr. Malone will be located at the Illinois company's general office.

Gordon Orelli, presently equipment maintenance engineer, senior supervising, at General Telephone Co. of California, will be transferred to General Telephone Service Corp. as electronic and development engineer, effective Oct. 16. In his new assignment, Mr. Orelli will be a member of the operations department and will report to Frank D. Reese, engineering director.

Raymond Sheehan, who is currently division manager of San Joaquin division of General Telephone Co. of California, will be transferred to General Telephone Co. of the Southeast as vice president and division manager for South Carolina, effective Nov. 1. Mr. Sheehan's headquarters for his new assignment will be at Sumter, S. C.

Obituary

FRANK R. S. KAPLAN, 71, chairman of the board and chief executive officer of the Copperweld Steel Co., died on Oct. 4 in his home in Pittsburgh, Pa. He was one of the founders of the company in 1915, and had been chairman of the board since 1955.

F. R. S. KAPLAN

Born in 1886, he moved to McKeesport, Pa., three years later with his parents, Abraham and Bessie Kaplan. He was graduated from the McKeesport Technical High School in 1904 and received his Bachelor of Arts degree in 1907 and a Master of Arts in 1912 from Washington & Jefferson College. During the same period, he was graduated from the University of Pittsburgh Law School and entered law practice in 1910. In addition to his Copperweld activities, he practiced law in Pittsburgh until 1949.

XUM

Mr. Kaplan was associated with Copperweld since its inception in 1915; today the company has four major divisions with plants at Warren, O.; Shelby, O.; Glassport, Pa.; and Oswego, N. Y. He served the company as secretary and treasurer, general counsel, vice president and was elected president in 1949.

Mr. Kaplan was awarded a citation from Washington & Jefferson College in recognition of devoted service to the community in 1953.

Mr. Kaplan was a member of the American Bar Association and the American Judicature Society.

He is survived by his wife, Madeline Roth Kaplan; his three children, Irving M. J. Kaplan, Lois Kaplan Finkel, Margery Kaplan Auerbach, and seven grandchildren—also four sisters, Mrs. Lawrence Wechsler, Mrs. Louis Wechsler, Mrs. Harry Anderson and Mrs. Adolph Blattner.

REA Borrower in Mo. Begins Buried Plant Installation

Work began the week of Sept. 30 on the first extensive installation of buried telephone plant on a borrower's system, the REA announced on Oct. 4. The installation is being made by the Northeast Missouri Rural Telephone Co., Greentop, Mo., as part of a general modernization program financed by REA.

The company is burying 296 route miles of wire and cable in rural areas served by its Green City, Winigan and Pollock exchanges. Only 37 miles of the three exchange areas will remain aerial.

Wire and cable used on the project were developed to meet REA specifications. A new type of terminal is also being used. Experience gained from the construction and operation of this project will provide guidance for other borrowers contemplating underground installation.

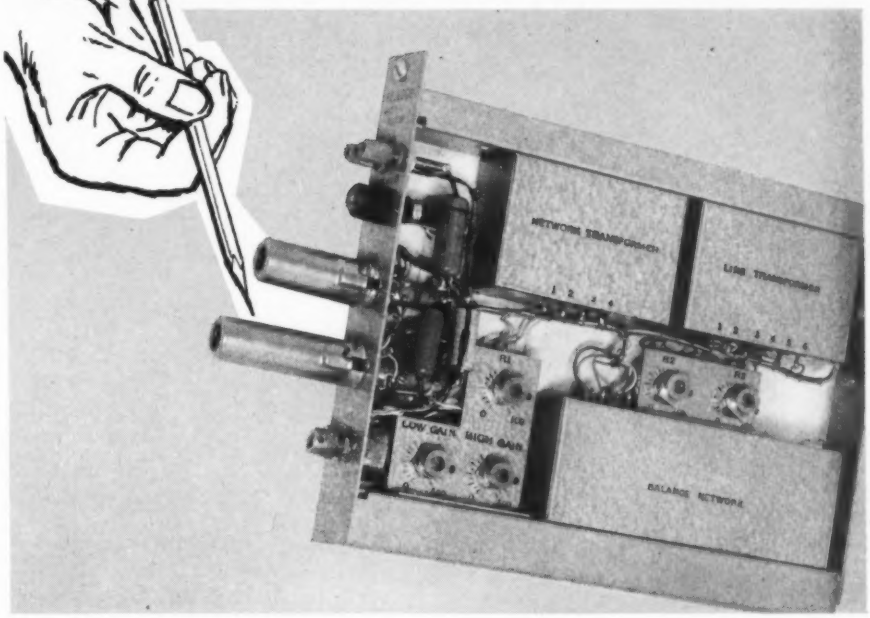
Telephone engineers anticipate that cost of constructing the buried plant will be less than equivalent aerial construction. They also predict considerable savings in maintenance costs.

Telephone engineers, company representatives, contractors, manufacturers and others interested in buried plant are invited by the Northeast company to visit the project area during October to observe construction methods and materials being used.

Strength of Habitude

"Men commonly think according to their inclinations, speak according to their learning and imbibed opinions; but generally act according to custom." —BACON.

at 60, KELLOGG points with pride to...



A REPEATER THAT GIVES MORE THAN GAIN

KELLOGG "TYPE Z" VF REPEATER . . . Low operating cost. Low first cost. Reduces transmission losses up to 85%. "Built-in" equalization. Flat circuit response over entire voice band. Variable controls make rapid setup practical. Optimum performance easily obtained. Operates from 48V exchange battery. Sealed components. Plug-in construction. Compactness. Universal application.

KELLOGG
A DIVISION OF I T & T

KELLOGG SWITCHBOARD & SUPPLY COMPANY
A Division of International Telephone and Telegraph Corporation
6650 S. Cicero Ave., Chicago 38, Ill.
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XUM

Participants in the Missouri Telephone Association's recent district meeting at Cameron, Mo.

Mo. Telephone Association Holds District Meetings

The Missouri Telephone Association held district meetings during the week of Sept. 9 at Cameron, Macon and Springfield, with a total attendance of 405. Harold Stouffer of Granby, president, conducted the meetings.

Governor James T. Blair Jr. of Missouri had proclaimed the week of Sept. 8 to 14, "Independent Telephone Week," and the morning programs at each of the sessions were devoted to this 60th anniversary celebration for the USITA. Foster B. McHenry, vice president of the USITA, and also president of Capital City Telephone Co. at Jefferson City, presented a brief history of the Independent industry and also some highlights of the development of the Missouri Telephone Association and the Missouri Independent industry.

At each district meeting, Harry Woodbury, demonstration engineer for the Southwestern Bell Telephone Co., presented a program entitled "New Frontiers of Telephone Science." Included in the lecture-demonstration were three new outstanding achievements of telephone science: the Bell solar battery, the transatlantic cable, and the U. S. Army's guided missile, Nike. Many operating exhibits were used to demonstrate these new developments from telephone research at Bell Telephone Laboratories.

Mr. Woodbury showed the Bell solar battery in action, converting light into electricity to run small motors and supplying energy to speak over a telephone. The story of the new underseas transatlantic telephone cable was told with scenes of the cable laying; and demonstration of the Army's guided-missile, Nike, now guarding many of the nation's cities, included a model rocket intercepting and shooting down a small plane.

R. W. Hedrick Sr. of Jefferson City, who has been secretary of the Missouri Telephone Association since May, 1922, told of varied experiences as secretary of the association at each of the meetings.

At the Cameron meeting George Hearne, vice president of the United Telephone Co. of Missouri, had as a special guest, Soekhai Parsan from the South American country Surinam (formerly Dutch Guiana) supervisor of the rural telephone system in that country. Under the sponsorship of the International Cooperation Administration and the Federal Communications Commission Mr. Parsan is spending six months in our country learning all he can about his field of telephone work.

GENERAL MACHINE PRODUCTS COMPANY, INC.
Old Lincoln Highway at Pa. Turnpike, Trevose, Pa.

Aerial Tents
Cable Benders
Cable Blocks
Cable Lashers
Coaxial Cable Tools
Lashing Wire Clamps and Grips
Portable & Power Reels

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R S Power Reel

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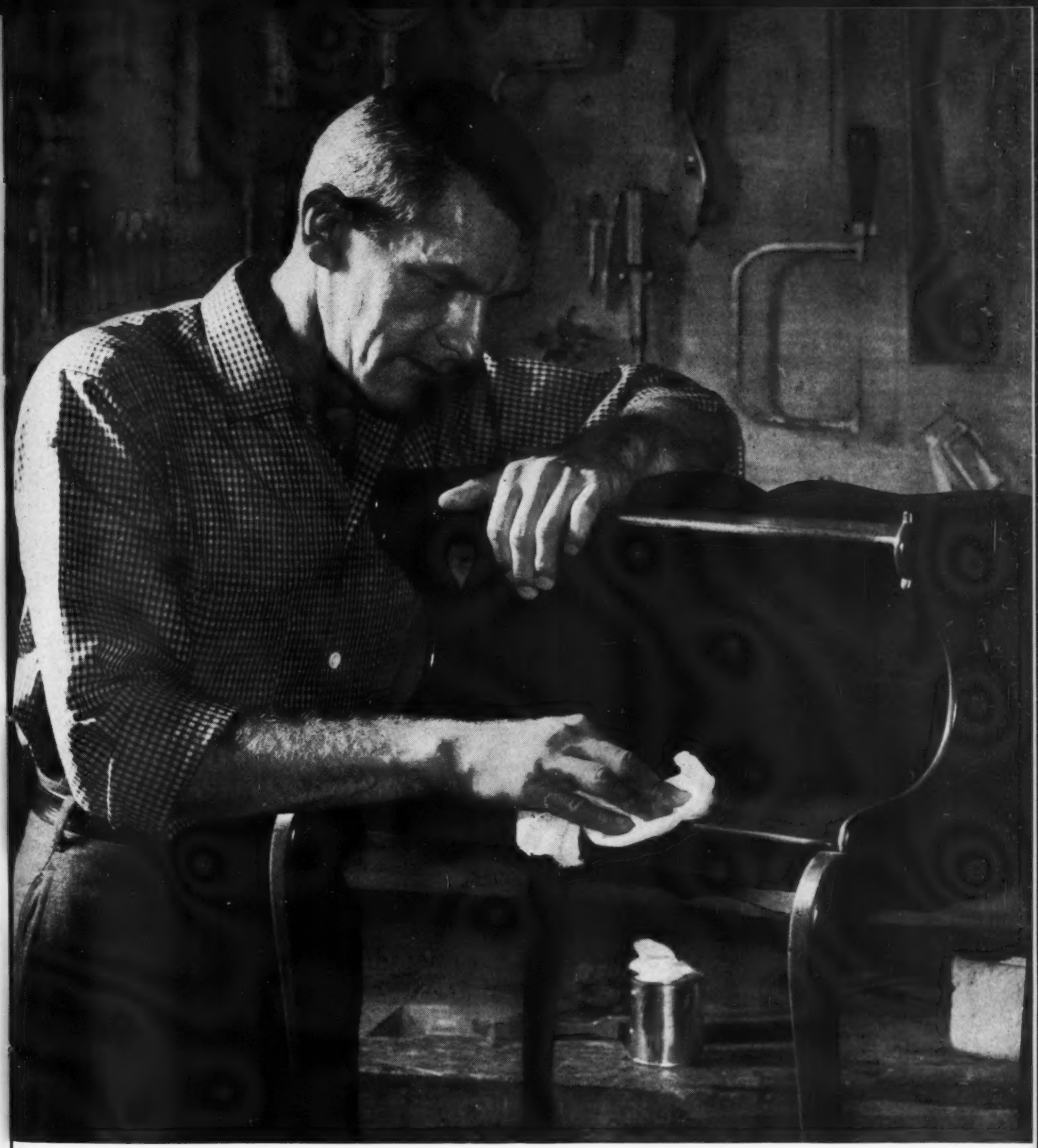
Special Purpose Tools To Specifications
Literature on Request

Over 500 various items of Line Construction Tools, Maintenance & Pressure-Testing Equipment in stock for immediate Shipment

SPECIALIZED COMMUNICATIONS EQUIPMENT SINCE 1918

GMPCO



TIME IS THE MEASURE OF ALL WOOD PRESERVATION

On the job–as on your own time–you know the importance of wood preservation.... The more the statistics accumulate, the more clearly the answer is AMCRECO pressure treatment.

AMCRECO
PRESSURE TREATED WOOD PRODUCTS

AMERICAN CREOSOTING CORPORATION LOUISVILLE 2, KENTUCKY
SUBSIDIARY OF UNION BAG-CAMP PAPER CORPORATION

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Mr. Parsan actively participated in the Cameron plant conference and discussed some of the plant problems in his home town, Paramaribo.

The General Telephone Co. of Missouri sponsored the Cameron and Macon meetings and Western Light & Telephone Co. was host at the Springfield meeting. The attendance at the Springfield meeting was 180 persons, which is the largest district meeting of the association since the meetings started in 1935.

Plant and traffic conferences were held each afternoon following the luncheon.

"Clearing Trouble in Outside Plant" and "Buried Outside Plant" were the subjects discussed at the plant meetings and testing equipment was demonstrated at the sessions.

At the Springfield meeting Jack Harty of Jefferson City, representing the Whitney-Blake Co., showed a 15-minute colored sound film known as "The Strandvise Story," prepared by the Reliable Electric Co. and demonstrating the proper installation of a down-guy.

The subject of the commercial conference was "Handling Business Office Contacts." James Cox of the General Telephone Co. of Missouri, discussed the subject, assisted by commercial office supervisors from Bell and Independent companies.

At the traffic conferences, a district traffic superintendent talked on: Preparation of toll tickets; toll completion report; credit card calls, and conservation of toll circuit time.

Waggoner Named Kellogg Production Control Head

Phillip Waggoner, formerly supervisor of material control and scheduling of Kellogg Switchboard & Supply Co., a division of International Telephone & Telegraph Corp., has been appointed production control manager, according to an announcement by William F. Boyd, vice president and director of manufacturing.

Mr. Waggoner joined the IT&T System in 1950 as production control manager of the Capehart-Farnsworth Co. in Flora, Ind., and subsequently held the positions of personnel manager and plant manager. In July, 1956 he transferred to the Kellogg division's electronic plant in Chicago as assistant to the manager of the Electronic Products Division.

Prior to his association with the IT&T System, he was employed by the F. L. Jacobs Co. and the Bowes Sealfast Co., both of Indianapolis, Ind., his native town. During World War II, he served for 4½ years with the U. S. Army.

PHILLIP WAGGONER

Leich Names Representatives For Ohio and Wisconsin

D. C. Gibson, president of Leich Sales Corp., announces the appointment of Thomas A. Markert as the Leich representative in the state of Ohio.

T. A. MARKERT

Mr. Markert, prior to joining Leich, sold equipment to the telephone industry for over five years. He is a graduate of Syracuse University.

Mr. Gibson also announces the appointment of James A. Brandt Jr. as the new Leich representative in the state of Wisconsin.

Mr. Brandt succeeds J. D. Kratz Sr., who is retiring. Mr. Kratz, who represented Leich for eight years, will continue to operate his own telephone company in Footville, Wis.

Mr. Brandt has been assistant to the

TELEPHONE AND TELEGRAPH EQUIPMENT

Radio Engineering Products is currently producing a number of types of equipment, electrically and mechanically interchangeable with standard Bel System apparatus.

CARRIER-TELEPHONE EQUIPMENT

C5 Carrier-Telephone Terminal (J68756). A kit for adding a fourth toll-grade channel to existing C systems is available. • C1 Carrier-Telephone Repeater (J68757) • 121A C Carrier Line Filter • H Carrier Line Filter (X66217C).

CARRIER-TELEGRAPH EQUIPMENT

40C1 Carrier-Telegraph Channel Terminal (J70047C) • 140A1 Carrier Supply (J70036A1, etc.) • 40AC1 Carrier-Telegraph Terminal.

VOICE-FREQUENCY EQUIPMENT

V1 Telephone Repeater (J68368F) • Power Supply (J68638A1) • V1 Amplifiers (J68635E2 and J68635A2) • V3 Amplifier (J68649A) • V-F Ringers (J68602, etc.) • Four Wire Terminating Set (J68625G1) • 1C Volume Limiter (J68736C).

D-C TELEGRAPH EQUIPMENT

16B1 Telegraph Repeater (J70037B) • 10E1 Telegraph Repeater (J70021A) • 128B2 Teletypewriter Subscriber Set (J70027A).

TEST EQUIPMENT

2A Toll Test Unit (X63699A) • 12B, 13A, 30A (J64030A) and 32A (J64032A) Transmission Measuring Sets • 111A2 Relay Test Panel (J66118E) • 118C2 Telegraph Transmission Measuring Set (J70069K) • 163A2 Test Unit (J70045B) • 163C1 Test Unit (J70045D).

COMPONENTS AND ACCESSORIES

255A and 209FG Polar Relays • Repeating and Retard Coils, several types • 184, 185, 230A and 230B Jack Mountings.

RADIO ENGINEERING PRODUCTS
1080 UNIVERSITY ST., MONTREAL 3, CANADA
TELEPHONE UNiversity 6-6887
CABLES RADENPRO, MONTREAL

J. A. BRANDT JR.

manager of the central district in the Chicago office. He has handled much of the correspondence and telephone calls from telephone companies in Wisconsin, so he will be calling on many people with whom he has worked in the past.

Raytheon Promotes Two in Communications Marketing

Edward Alpert and Joseph J. Sedik have been advanced to new positions in a recent reorganization of the communications marketing department of the Raytheon Manufacturing Co.'s commercial equipment division.

Mr. Alpert, formerly assistant product planning manager, has been promoted to communications field sales administrator. He will be in charge of sales planning and marketing administration for Raytheon microwave television relays and message circuit communications equipment. Mr. Alpert will also head the communications staff sales engineering group.

Mr. Sedik, formerly chief communications systems engineer, has been promoted to communications product planning manager. He will direct the planning of new communications products and markets. Mr. Sedik will also be responsible for the overall coordination of the communications product line, including engineering, manufacturing, and marketing.

Acoustical Audio Meeting

The November meeting of the Chicago Acoustical and Audio Group, scheduled for Nov. 20 at the Stritch School of Medicine, Loyola University, will feature the subject: "Ultrasound: Biological Effects and Medical Application." Jerome W. Gersten, M.D., professor of physical medicine and rehabilitation at the University of Colorado school of medicine, Denver, is the speaker.

Onan ELECTRIC PLANTS

ELECTRIC PLANT NEWS

Onan ELECTRIC PLANTS

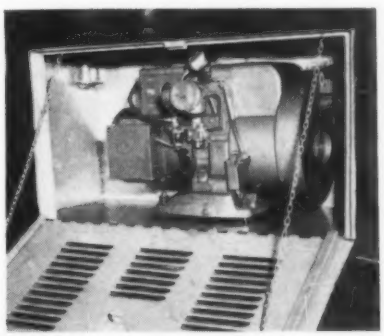
Truck-mounted electric plant cuts costs two ways

Onan Plant provides A.C. power for electric tools and lights, and D.C. output to charge batteries for radio communication.

Utilities using this dual-purpose Onan Electric Plant on trucks report savings ranging from *$2.00 per day* per truck to *$800.00 per year* per truck . . . for the battery-charging feature alone. Before installation of the Onan plant it was necessary to keep the large truck engine running to charge batteries, extremely wasteful from the viewpoint of fuel and engine maintenance.

The Onan plant shown is a Model O7AK, developing 750 watts of A.C. with about 8 amperes for 12-volt battery charging. It is powered by an Onan single-cylinder, air-cooled gasoline engine direct-connected to an Onan all-climate generator in a compact, rigid, long-life unit. A.C. output is sufficient for operation of drills, saws and other tools used for construction and maintenance.

Other vehicular battery charging plants and A.C. models available.



Vacu-Flo cooling system permits enclosed installation

With Onan's Vacu-Flo system, air is drawn (rather than blown) through generator and engine, and discharged through a duct to the outside. An Onan air-cooled plant with Vacu-Flo can be installed in a small compartment within truck or trailer.

Ask your Onan distributor about this dual-purpose unit or write for circular on three battery charging methods.

D. W. ONAN & SONS INC.

Onan ELECTRIC PLANTS

4067 University Ave. S. E., Minneapolis 14, Minnesota

ELECTRIC PLANTS • AIR-COOLED ENGINES • GENERATORS • KAB KOOLER

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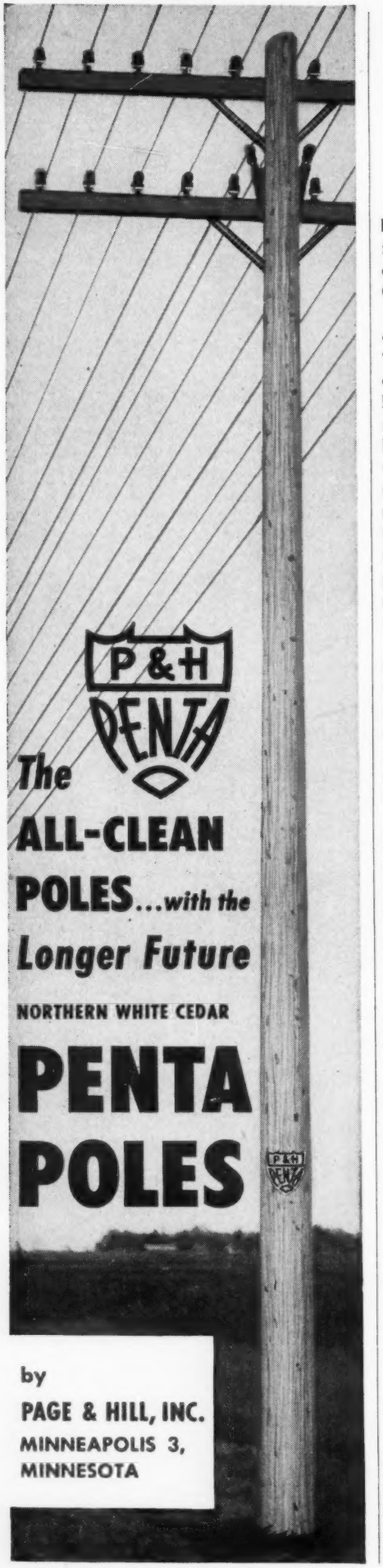

Helpful Literature

MOBILE INSTALLATIONS—How 2 horsepower can do the job of 160 hp for keeping truck radio batteries charged, is described and illustrated in Onan's new Mobile Installations folder.

The company states the illustrated, eight-page folder describes three Onan "packaged" power systems, each specifically engineered to provide dependable, low-cost electric power for all users of mobile communications equipment. The brochure points up the heavy drain on vehicle batteries when mobile radios are used and the truck engine is not running, and tells in detail how Onan's little 2-horsepower engine-driven electric plants do the job of the 160-horsepower truck engine, with the resultant savings in gasoline and truck engine maintenance.

The three systems described in the folder: (1) Battery charging with ac power; (2) high battery charging output; (3) battery charging only, are clearly illustrated. Specific Onan electric plants are recommended and an easy-to-follow chart cites uses and advantages of each system.

How Onan's exclusive Vacu-Flo cooling permits installation of generating sets in compartments or locations where adequate cooling presents a problem is also discussed in this new folder. In addition, a résumé of the entire Onan electric plant line (from 500 to 75,000 watts) is given.

The folder is available upon request to all manufacturers and users of mobile communications equipment: public utilities, police and fire departments, civil defense, railroads, municipalities, logging camps, and pipelines; and especially to all engineers, purchasing agents, garage superintendents and interested officials of these groups. Request HL371.

•

ELECTRONICS EMPLOYMENT—Cleveland Institute of Radio Electronics announces publication of a completely new brochure and course outline, bringing electronic industry employment requirements and opportunities completely up to date.

Employers of technical electronics personnnel have long been aware that the successful employe must have a thorough understanding of fundamentals. Without such an understanding the opportunities for success are remote.

The new Cleveland Institute brochure presents the subject from the viewpoint that true technical competence in electronics is necessary to guarantee success in such a rapidly changing field. Request HL372.

•

TRAINING PLAN FOR PRESENT EMPLOYES—A new plan to provide electronic technicians for employers without hiring new personnel has been announced by Cleveland Institute of Radio Electronics. To explain this program, Cleveland Institute has prepared a 16-page booklet titled "How to Get a Licensed Technician for Two-Way Radio-Microwave Electronic Equipment."

According to Carl Smith, president of Cleveland Institute, this program was developed to solve a common problem in industry today. This problem is how

TELEPHONY PUBLISHING CORP.
608 S. Dearborn St.
Chicago 5, Ill.

Please have the manufacturer send me without obligation further information on the products described in the following numbers:

HL371_____; HL372_____; HL373_____; HL374_____;
HL375_____; HL376_____; HL377_____; HL378_____;
HL379_____.

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When it comes to leather goods for linemen or electricians, the name Klein today stands for the highest in quality as it has since the first wires were strung.

In Klein-Kord, too, Klein offers to industry the first specially woven fabric for safety straps—a fabric designed to permit the use of a tongue-type buckle without the risk of slitting or ripping under severe strain.

Now in Nylon Klein-Kord safety straps Klein still leads with the newest in safety equipment specially designed for use by utilities wherever power or communication lines are strung.

Write for Free Tool Guide
A free copy of the new Klein Pocket Tool Guide will be sent to anyone interested on request.

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Foreign distributor:
International Standard Electric Corp., N.Y.

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to use the capabilities of people in their own organizations who do the job, if only they have the necessary training in electronic's fundamentals.

To solve the problem, Cleveland Institute's new employer's plan lets the employer pick his own man or men who are interested and have the aptitude for electronics work. They are then enrolled in the institute's special home study course in electronics.

Cleveland Institute will guarantee to train him in the fundamentals of electronics until his proficiency is great enough to pass not only the institute's own comprehensive examinations, but the FCC license examinations as well.

Without losing a single manhour, the employer can have a trained electronic technician at a fraction of the cost of resident training. Each trainee has had the benefit of personal instruction—each trainee has had his knowledge of electronic fundamentals thoroughly tested and measured by institute tests. In addition he is trained until he successfully passes the FCC examination. Request HL373.

•

BROCHURE ON TELEPHONE BOOTHS—Suttle Equipment Co., in a new brochure, describes its standard line of telephone booths, including standard finishes.

Folder shows illustrations and gives descriptions of the modular, single and double commercial, directory, unit row, full length, shop, industrial, office equipment and personal desk booths. Also the Handi Booth (a drive-up, walk-up booth).

Included, too, are the sliding directory and four binder directory shelves, as well as available accessories. Request HL374.

•

ELECTRODE GUIDE—A new 70-page Electrode Pocket Guide which contains information essential to anyone concerned with buying or using electrodes is now available from Air Reduction.

Among the many helpful features of the booklet is an electrode consumption calculator, in tabular form, which provides data for calculating consumption per linear foot in the welding of various types of joints.

The guide describes each Airco electrode, its color code, its application, and the best procedure for its use in welding. Weld-metal chemical analyses and mechanical properties are fully explored. Such related information as the factors which determine electrode selection, industrial and government specifications for filler metals, and testing of deposited weld metal is also discussed. Request HL375.

•

ENGINEERING PRODUCTS—A 14-page booklet describing the uses and benefits of Murphy Engineering Laboratories' products now in production and available, as well as many new products still in the field-testing stage, is now available.

Among the products featured in the booklet are: One-man cable pair identifier; one-man working cable testers; terminal stub testers; vinyl plastic insulated test cords; a foolproof ohmmeter; a pocket size bridge circuit for very rapid testing of circuits to locate trouble; a pressure alarm system that will advise immediately when pressure in any cable lateral falls below a specified minimum; and the Murphy One-Man Cable Tester to "buzz through" a wet section of cable. Request HL376.

•

STATIONARY DIESEL ENGINES—The model 65 Superior stationary diesel is described in new Bulletin No. 111 offered by White Diesel Engine Division, The White Motor Co.

According to the literature, model 65's are built as four cycle, six or eight cylinder, vertical, in-line engines. Power range is 580 to 2150 BHP continuous. Engines are used with generators of 400 to 1500 kw.

They are available naturally aspirated or supercharged, left or right hand, clockwise or counter-clockwise rotation. Model can be furnished as a dual-fuel engine, which operates on either 100 per cent oil or natural gas with pilot fuel injection for ignition. It easily handles non-premium fuels for lowest cost power production, the booklet states.

The bulletin lists typical applications as municipal, public utility, institution, and office building power plants; water works and sewage disposal plants; pipe line pumping; dredges, quarries, and other general industrial applications.

Included in the eight-page, two-color bulletin are product photos, construction feature illustrations, specifications, and performance curves. Request HL-377.

•

BATTERY MANUAL—The complete scope of motive-power battery maintenance and repair is described in a revised edition of the "Battery Users Manual," just issued by the Industrial Division of Gould-National Batteries, Inc.

Developed as a result of in-plant training courses conducted by Gould service engineers, the 44-page book has been specifically designed to enable plant engineers, superintendents and foremen to conduct an organized battery training course in their own plant.

Encompassing every phase of battery maintenance, repair and selection, this reference manual includes over 60 photographs, diagrams and tables to review battery theory and construction, demonstrate proper battery selection, illustrate charging method and equipment, demonstrate battery testing and techniques, and to present correct battery room layout. Request HL378.

•

LOADING COILS—Communication Equipment & Engineering Co. announces publication of its brochure on specifications for Ceeco voice frequency loading coils.

These coils are used primarily for loading exchange and toll entrance cables. The coils are potted in either lead sleeves or steel cases or all furnished with leads for splicing in sleeves made on the job.

The voice frequency loading coils Type C632 and C638, are designed primarily for use on two-wire telephone circuits in non-quadded paper or plastic-insulated cable. Four types of coils are available for quadded inter-office trunks and toll entrance cables.

Instructions for splicing the loading coils in various situations are also included. Request HL379.

Develop Telephone Device For Totally Deaf

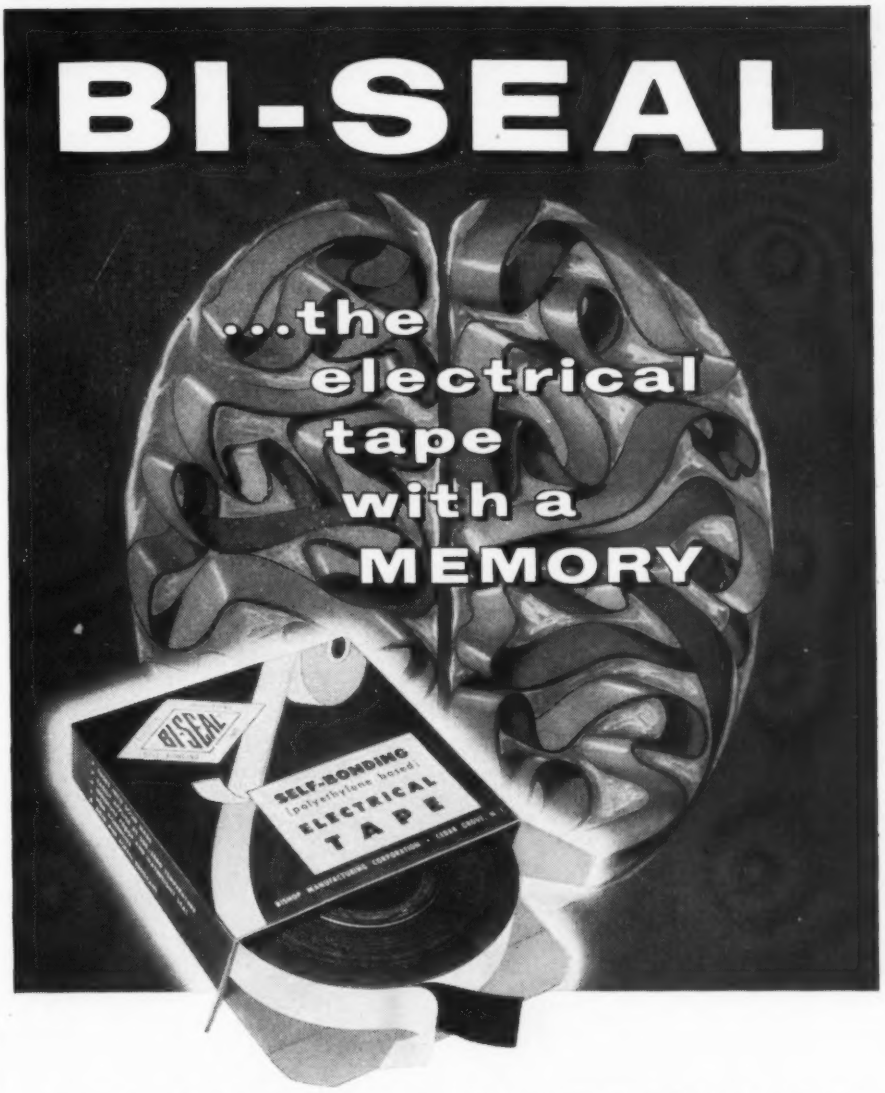
A Highland Park, Ill., laboratory has developed a telephone for the totally deaf. The invention has been turned over to the Illinois Bell Telephone Co. which has built 12 experimental units.

The original set was developed for Richard Kinney, instructor at the Hadley School for the Blind in Winnetka, Ill. Mr. Kinney is both deaf and blind.

The set was invented by Robert Oakes Jordan, electronics expert, who heads a laboratory bearing his name and located in Winnetka. Mr. Jordan and his wife both teach at the Hadley school where they met Mr. Kinney.

The device is known as the Tactophone and employs a dual touch and sound system. Jordan built a special diaphragm into a telephone receiver, allowing Kinney to feel dial clicks, with a touch of his finger.

To make a call, Kinney dials a number and asks the party at the other end to dial a certain code number if he had the right party. When the



Bishop's Bi-Seal, a self-bonding (polyethylene based) electrical tape, possesses the unique characteristic peculiar to many plastic products . . . a retentive memory. When Bi-Seal is stretched during a normal splicing operation it "remembers" its original shape and fuses into a tight, homogeneous mass in an attempt to return to its normal form.

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other party dials, Kinney's sensitive finger picks up the clicks by touching the exposed diaphragm. He then states his business and the party on the other end answers him by dialing in the continental dot-dash code.

A dash is transmitted by dialing "4" and the dot by the digit "1." The party at the other end should know the code, although in an emergency Kinney can ask the other person to dial certain numbers with his reply.

Graybar Names Managers At Tulsa and Denver

Mr. W. Frazier, midwestern district manager of the Graybar Electric Co., announces that effective Sept. 1, C. R. Downing Jr. was appointed manager at Tulsa. On Oct. 1, F. L. Cummings, former Tulsa manager, transferred to Denver in the same capacity.

Mr. Downing started at Graybar, Tulsa as a quotation clerk on July 23, 1947. In 1951 he was appointed assistant manager of supply sales, and two years later was promoted to manager of supply sales. From 1954 until his current appointment, he has served as both salesman and manager of supply sales.

Mr. Cummings began in the Tulsa sales quotation department on Mar. 1, 1934. In 1944 he was promoted to commercial manager and in 1947 was appointed branch manager, the position held until his present transfer.

Stromberg Appoints Kertson To Washington, Alaska Sales

George S. Kertson, of Everett, Wash., has been appointed a sales representative with the telecommunication division of Stromberg-Carlson, a division of General Dynamics Corp., according to an announcement by T. C. Thompson, general sales manager of the telecommunication division.

Mr. Kertson replaces Charles E. Fogg, of the company's San Francisco office, which is under the direction of J. P. Galligan, branch manager. Mr. Kertson will serve Independent companies in the state of Washington and the territory of Alaska. Mr. Fogg has returned to Rochester and is now with the national telecommunication sales engineering staff.

Mr. Kertson joins Stromberg-Carlson from the West Coast Telephone Co., in Everett, Wash., where he had been in charge of all equipment installation work since 1952. Under his direction this grew into a three-state

G. S. KERTSON

operation, including construction, installation, maintenance and storage of central office equipment. He supervised many conversions to dial service, from small 100-line offices to multi-unit exchanges, with complete responsibility for all phases of the work.

Previously Mr. Kertson was with the equipment engineering department of the West Coast Telephone Co. He began his career in telephony in 1940

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LOOK TO LINDSAY

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as an installer with the Western Electric Co. His career was interrupted by military service in 1944, but was continued upon his return to the company in 1946, and he became equipment supervisor.

Mr. Kertson is a veteran of the U.S. Navy, and served as shipboard electrician in the South Pacific.

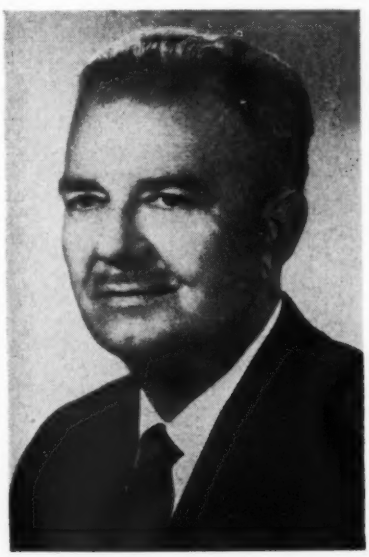
A native of Spokane, Wash., he received his education in Salem, Ore., before moving to Everett.

Collins Radio Names Hunt Atlanta Sales Engineer

The appointment of J. N. Hunt as Atlanta district sales engineer for the Collins Radio Co. has been announced by T. W. Sharpe, Texas region sales manager for Collins. Mr. Hunt will serve microwave users in his sales area, Mr. Sharpe said.

A 1954 graduate of the Georgia Institute of Technology, Mr. Hunt majored in electrical engineering in communication, and was an associate field engineer for Collins before receiving the Atlanta assignment.

A radio amateur for the last 20 years, Mr. Hunt was formerly associated with Lockheed Aircraft as a special course instructor in electronic systems. He also served for 10 years as a communication specialist for the Atlanta and West Point railroad and for two years served in the navy as an electronic systems specialist.



J. Allan Abbott, president of Homelite, a division of Textron Inc., announces the appointment of Nelson Thompson (above) to the newly created position of executive vice president. Mr. Thompson has been vice president-sales, since 1941. He joined the company in 1929 as a salesman and later organized the Detroit sales area.

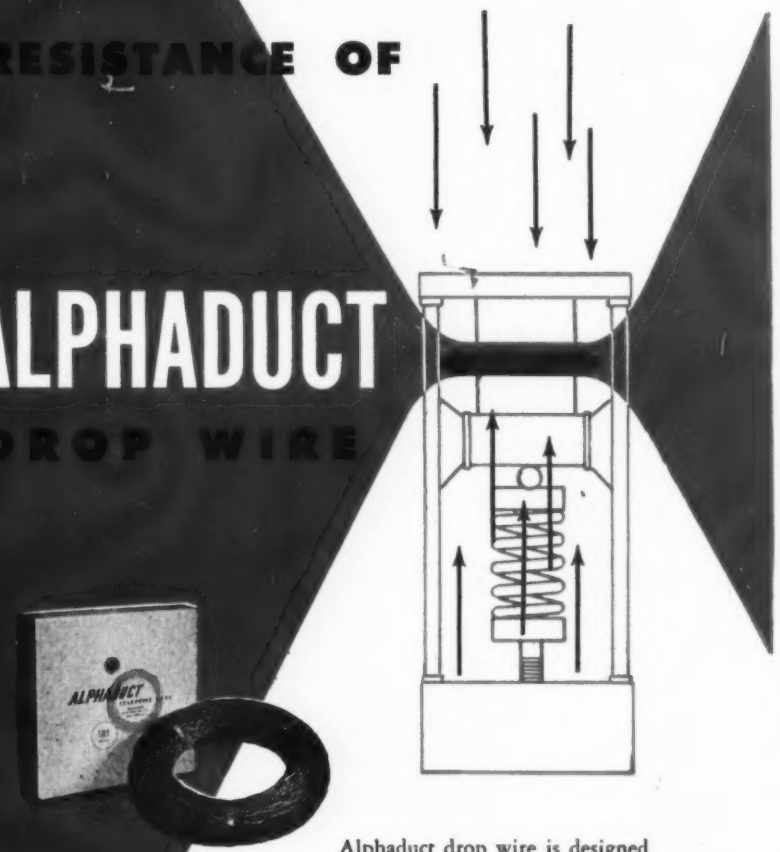
1500 pounds

MINIMUM COMPRESSION

RESISTANCE OF

ALPHADUCT

DROP WIRE



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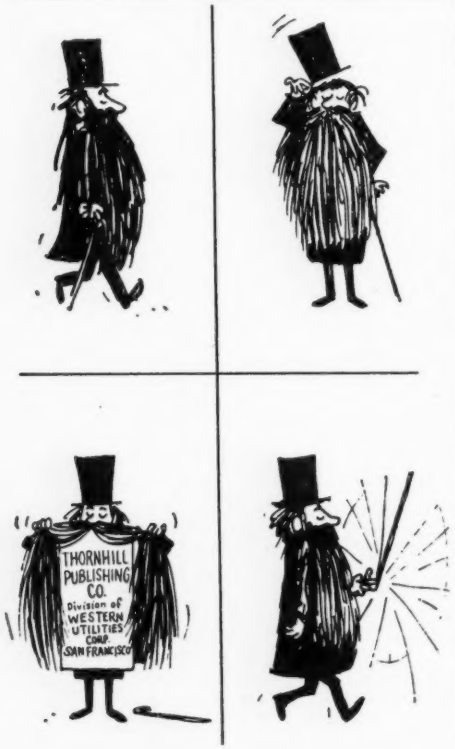

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A. B. Chance Announces Three Promotions

The A. B. Chance Co. announces the promotion of E. G. Ryman to vice president and general manager of the Carey, O. plant of Porcelain Products, Inc., a Chance company subsidiary. The appointment was announced by F. Gano Chance, president of the parent company, in Centralia. Mr. Ryman has been A. B. Chance Co.'s regional sales manager for 11 western states, Hawaii and Alaska for the past three years.

E. G. RYMAN

Mr. Ryman, who will begin his new duties about Nov. 1, will be responsible for management of all phases of the Carey plant's operations including manufacturing, sales, accounting, engineering, personnel and other departments.

The Carey, O., plant is referred to as the "low voltage" division of Porcelain Products, Inc., which Chance purchased two years ago and operates as a subsidiary. This plant, established in 1894, makes low voltage insulators and related items used by the electrical and telephone industries.

Mr. Ryman has been with the Chance company 23 years, starting in the Centralia plant's production department in 1934. Two years later, he was transferred to the sales department. In the following decade he gained experience in all phases of the company's operations.

In 1947, shortly after the company began its post-war expansion with the purchase of the Bowie Switch Co. of San Francisco, Mr. Ryman transferred to Portland, Ore., as district sales manager.

He was promoted to western regional sales manager in 1954 and transferred to the west coast headquarters in San Francisco.

Promotions for two members of A. B. Chance Co.'s field sales staff have been announced by L. C. Hansen, the company's director of marketing.

Dwight E. Argo, southwest regional sales manager, will be transferred from Dallas, Tex., to San Francisco to be regional sales manager for the 11 western states.

Albert B. Goodall, Levittown, Pa., will be promoted from district sales manager to head the southwestern region.

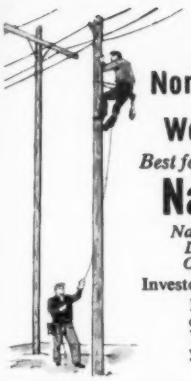
The new assignments will be effective about Nov. 1.

D. E. ARGO

A. B. GOODALL

Mr. Argo will succeed E. G. Ryman, who becomes general manager of the Carey, O., plant of Porcelain Products, Inc., a Chance subsidiary.

Mr. Argo joined the Chance sales staff in 1941. He worked in the Centralia sales office from 1942 to 1944, then returned to field sales. He advanced from salesman to senior salesman to district sales manager and, in 1954 was promoted to regional manager.



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Dierks Forests, Inc. (formerly Dierks Lumber & Coal Co.) Wood Preserving Division, 810 Whittington Ave., Hot Springs, Arkansas. Southern Pine select poles, all sizes and lengths, creosote and penta-pressure treated. Prompt shipment.

Eppinger & Russell Co., 80—8th Avenue, New York 11, N. Y.—Creosoted Poles and Cross Arms. Plants: Jacksonville, Fla., Norfolk, Va., Eddington, Pa.

International Creosoting and Construction Co., Galveston, Texas.—Creosoted Southern Yellow Pine Poles. Plants Beaumont and Texarkana, Texas.

International Paper Co., Long Bell Division, 926 Grand Ave., Kansas City, Mo. —Pressure-treated Southern Pine and Douglas Fir Poles. Creosote and Penta preservatives.

Montana Pole & Treating Plant—Box 2004, Butte, Montana. Penta-Pressure treated Lodgepole Pine and Western Larch Poles. Inquiries invited.

Texas Creosoting Company—512 Main Street, Orange, Texas—Creosoted Southern Yellow Pine and Douglas Fir Poles. Can also treat with "Penta."

Mr. Goodall has been with Chance since 1948, starting as a trainee salesman. He worked as a sales representative, and as application engineer in the Centralia office, before becoming a district sales manager in 1956.

Chase Opens New Warehouse

A new San Francisco, Cal., warehouse and district sales office was opened last month by the Chase Brass & Copper Co. The building, which provides approximately 62,000 square feet of space, is located at 230 Shaw Road. Chase's headquarters are at Waterbury, Conn.

Employe Opportunity

"The underlying question is, how do we look at the individual? Do we say, 'Here is a person we intend to guide according to our ideas of how he should grow?' Or do we say rather, as George Wythe must have said to himself when he looked at Jefferson, 'We want the conditions of this person's work to be such that he will surely become everything he can be?' "—CLEO F. CRAIG, *chairman of the board, American Telephone & Telegraph Co.*

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